

Drawn from Nature by A. Wilson

Engraved by A. Lawson

1 Fish Hawk. 2 Fish Crow. 3 King Plover. 4 Least Snipe.

AMERICAN ORNITHOLOGY;

OR,

THE NATURAL HISTORY

OF THE

BIRDS OF THE UNITED STATES.

ILLUSTRATED WITH PLATES

Engraved and Colored from Original Drawings taken from Nature.

BY ALEXANDER WILSON.

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PREFACE.

THE fifth volume of this extensive work is submitted to the public with all due deference and respect; and the author having now, as he conjectures, reached the middle stage of his journey, or, in traveller's phrase, the 'half-way house,' may be permitted to indulge himself with a slight retrospect of the ground he has already traversed, and a glimpse of that which still lies before him.

The whole of our Land Birds (those of the sixth volume included, which are nearly ready for the press) have now been figured and described, probably a very few excepted, which, it is hoped, will also shortly be obtained. These have been gleaned up from an extensive territory of woods and fields, unfrequented forests, solitary ranges of mountains, swamps and morasses, by successive journeys and excursions of more than ten thousand miles. With all the industry which a single individual could possibly exert, several species have doubtless escaped him. These, future expeditions may enable him to procure; or the kindness of his distant literary friends obligingly supply him with.

In endeavouring to collect materials for describing truly and fully our feathered tribes, he has frequently had recourse to the works of those European naturalists who have written on the sub-

ject; he has examined their pages with an eager and inquisitive eye; but his researches in that quarter have been but too frequently repaid with disappointment, and often with disgust. On the subject of the *manners* and *migrations* of our birds, which in fact constitute almost the only instructive and interesting parts of their history, all is a barren and a dreary waste. A few vague and formal particulars of their size, specific marks, &c. accompanied sometimes with figured representations that would seem rather intended to caricature than to illustrate their originals, is all that the greater part of them can boast of. Nor are these the most exceptionable parts of their performances; the novelty of fable, and the wildness of fanciful theory, are frequently substituted for realities; and *conjectures* instead of *facts* called up for their support. Prejudice, as usual, has in numerous instances united with its parent, ignorance, to deprecate and treat with contempt what neither of them understood; and the whole interesting assemblage of the feathered tribes of this vast continent, which in richness of plumage, and in strength, sweetness and variety of song, will be found to exceed those of any other quarter of the globe, are little known save in the stuffed cabinets of the curious, and among the abstruse pages and technical catalogues of dry systematic writers.

From these barren and musty records, the author of the present work has a thousand times turned, with a delight bordering on adoration, to the magnificent repository of the woods and fields—the *Grand Aviary of Nature*. In this divine school he has studied from no vulgar *copy*; but from the works of the **GREAT MASTER OF CREATION** himself; and has read with rapture the lessons of

his wisdom, his goodness and his love, in the conformation, the habitudes, melody and migrations of this beautiful portion of the work of his hands. To communicate as correct ideas of these as his feeble powers were capable of, and thus, from objects, that, in our rural walks almost every where present themselves, to deduce not only amusement and instruction, but the highest incitements to virtue and piety, have been the author's most anxious and ardent wish. On many of his subjects, indeed, it has not been in his power to say much. The recent discovery of some, and the solitary and secluded habits of others, have opposed great obstacles to his endeavours in this respect. But a time is approaching when these obstacles will no longer exist. When the population of this immense western Republic will have diffused itself over every acre of ground fit for the comfortable habitation of man—when farms, villages, towns and glittering cities, thick as the stars in a winter's evening, overspread the face of our beloved country, and every hill, valley and stream has its favorite name, its native flocks and rural inhabitants; then, not a warbler shall flit through our thickets but its name, its notes and habits will be familiar to all; repeated in their sayings, and celebrated in their village songs. At that happy period, should any vestige or memory of the present publication exist, be it known to our more enlightened posterity, as some apology for the deficiencies of its author, that in the period in which he wrote three-fourths of our feathered tribes were altogether unknown even to the proprietors of the woods which they frequented—that without patron, fortune or recompence, he brought the greater part of these from the obscurity of ages, gave to each “a local habitation

and a name”—collected from personal observation whatever of their characters and manners seemed deserving of attention; and delineated their forms and features, in their native colors, as faithfully as he could, as records, at least, of their existence.

In treating of those birds more generally known, I have endeavoured to do impartial justice to their respective characters. Ignorance and stubborn-rooted opinions, even in this country, have rendered some odious that are eminently useful; and involved the manners of others in fable and mystery, which in themselves are plain and open as day. To remove prejudices when they oppose themselves to the influence of humanity is a difficult, but when effected, a most pleasing employment. If therefore, in divesting this part of the natural history of our country of many of its fables and most forbidding features, and thus enabling our youth to become more intimately acquainted with this charming portion of the feathered creation, I should have succeeded in multiplying their virtuous enjoyments, and in rendering them more humane to those little choristers, how gratifying to my heart would be the reflection! For to me it appears, that of all inferior creatures Heaven seems to have intended birds as the most cheerful associates of man; to soothe and exhilarate him in his labours by their varied melody, of which no other creature, but man, is capable; to prevent the increase of those supernumerary hosts of insects that would soon consume the products of his industry; to glean up the refuse of his fields “that nothing be lost,” and, what is of much more interest, to be to him the most endearing examples of the tenderest connubial love and parental affection.

As to what still remains to be done, let the following slight sketch suffice. The number of plates for each volume being fixed, the size of the volume will depend, as heretofore, on the characters of the birds being more or less interesting. The present is more so than the preceding, and contains a number of noted birds whose histories will be found to be fully detailed. A wish to reduce as few of the drawings from the full size as possible, may sometimes lessen the number of figures; but the value of those given will always, in this case, be increased, by the greater pains and expense bestowed on their execution.

In the sixth volume the Woodcock, Snipe, Partridge, Ruffed Grous or Pheasant, the Rail, the beautiful Ground Dove of the southern states, numbers of Hawks, some of them very rare, Owls, Buzzards, Vultures, &c. &c. will make their appearance. The engravers being already considerably advanced with these, it is confidently hoped that no delay will be experienced beyond the regular time of publication.

The seventh volume will introduce the Grallæ or Waders, a numerous order of birds in the United States. The greater part of these being too large to be represented in full size, will be reduced from the original drawings by the author himself, with as much precision as he is capable of, and in such manner that all the figures exhibited on the same plate will be reduced by the same scale; thereby preserving a correct idea of their relative as well as apparent natural magnitude. Some of these are new; and peculiarities will be pointed out in many of them which are truly singular and interesting. The tenth volume, with a complete in-

dex, and some other requisite matters, with perhaps an appendix comprehending stragglers of various classes, will probably complete the whole.

The publication of an original work of this kind in this country has been attended with difficulties, great, and, it must be confessed, sometimes discouraging to the author, whose only reward *hitherto* has been the favourable opinion of his fellow citizens, and the pleasure of the pursuit. The support, however, which he has uniformly received from the artists and others engaged in the work has fully equalled his expectations, and demands his public and grateful acknowledgments. The engravings will be a lasting monument to the merits of Messrs. Lawson, Murray and Warnicke; and the elegance of the letter press, which even in Europe has excited admiration, does the highest honor to the taste of the founders, Messrs. Binney & Ronaldson, as well as to the professional talents and constant attention of the printers, Messrs. R. & W. Carr; while the unrivalled excellence of the paper, from the manufactory of Mr. Amies, proves what American ingenuity is capable of producing when properly encouraged.

Let but the generous hand of patriotism be stretched forth to assist and cherish the rising arts and literature of our country, and both will most assuredly, and that at no remote period, shoot forth, increase and flourish with a vigor, a splendor and usefulness inferior to no other on earth.

ALEXANDER WILSON.

Philadelphia, Feb. 12th, 1812.

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AMERICAN ORNITHOLOGY.

FISH-HAWK, OR OSPREY.

FALCO HALIÆTUS.

[Plate XXXVII.—Fig. 1.]

Carolina Osprey, LATH. *Syn.* I, p. 46—26. A.—*Falco piscator*, BRISS. I, p. 361. 14. 362. 15.—*Faucon pêcheur de la Caroline*, BUFF. I, p. 142.—*Fishing Hawk*, CATESB. *Car.* I, p. 2.—TURT. *Syst.* I, 149.—PEALE's *Museum*, No. 144.

THIS formidable, vigorous-winged, and well known bird, subsists altogether on the finny tribes that swarm in our bays, creeks, and rivers; procuring his prey by his own active skill and industry; and seeming no farther dependant on the land than as a mere resting place, or, in the usual season, a spot of deposit for his nest, eggs and young. The figure here given is reduced to one-third the size of life, to correspond with that of the Bald Eagle, his common attendant, and constant plunderer.

The Fish-Hawk is migratory; arriving on the coasts of New York and New Jersey about the twenty-first of March, and retiring to the south about the twenty-second of September. Heavy equinoctial storms may vary these periods of arrival and departure a few days; but long observation has ascertained, that they are kept with remarkable regularity. On the arrival of these birds in the northern parts of the United States, in March, they sometimes find the bays and ponds frozen, and experience a difficulty in procuring fish for many days. Yet there is no instance on record of their attacking birds, or inferior land animals, with intent to feed

on them; tho' their great strength of flight, as well of feet and claws, would seem to render this no difficult matter. But they no sooner arrive than they wage war on the Bald Eagles as against a horde of robbers and banditti; sometimes succeeding, by force of numbers and perseverance, in driving them from their haunts; but seldom or never attacking them in single combat.

The first appearance of the Fish-Hawk in spring is welcomed by the fishermen, as the happy signal of the approach of those vast shoals of herring, shad, &c. &c. that regularly arrive on our coasts, and enter our rivers in such prodigious multitudes. Two of a trade, it is said, seldom agree; the adage, however, will not hold good in the present case, for such is the respect paid the Fish-Hawk not only by this class of men, but, generally, by the whole neighbourhood where it resides, that a person who should attempt to shoot one of them, would stand a fair chance of being insulted. This prepossession in favour of the Fish-Hawk is honorable to their feelings. They associate with its first appearance ideas of plenty, and all the gaiety of business; they see it active and industrious like themselves; inoffensive to the productions of their farms; building with confidence, and without the least disposition to concealment, in the middle of their fields, and along their fences; and returning year after year regularly to its former abode.

The nest of the Fish-Hawk is usually built on the top of a dead or decaying tree, sometimes not more than fifteen, often upwards of fifty feet, from the ground. It has been remarked by the people of the sea-coasts that the most thriving tree will die in a few years after being taken possession of by the Fish-Hawk. This is attributed to the fish-oil, and to the excrements of the bird; but is more probably occasioned by the large heap of wet, salt materials of which it is usually composed. In my late excursions to the sea-shore I ascended to several of these nests that had been built in from year to year, and found them constructed as follows: externally large sticks, from half an inch to an inch and a half



in diameter, and two or three feet in length, piled to the height of four or five feet, and from two to three feet in breadth; these were intermixed with corn-stalks, sea-weed, pieces of wet turf in large quantities, mullein-stalks, and lined with dry sea-grass; the whole forming a mass very observable at half a mile's distance, and large enough to fill a cart, and form no inconsiderable load for a horse. These materials are so well put together, as often to adhere in large fragments after being blown down by the wind. My learned and obliging correspondent of New York, Dr. Samuel L. Mitchill, observes, that "A sort of superstition is entertained in regard to the Fish-Hawk. It has been considered a fortunate incident to have a nest, and a pair of these birds, on one's farm. They have therefore been generally respected; and neither the axe nor the gun has been lifted against them. Their nest continues from year to year. The same couple, or another as the case may be, occupies it season after season. Repairs are duly made, or when demolished by storms it is industriously rebuilt. There was one of these nests, formerly, upon the leafless summit of a venerable chesnut-tree on our farm, directly in front of the house, at the distance of less than half a mile. The withered trunk and boughs, surmounted by the coarse wrought and capacious nest, was a more picturesque object than an obelisk. And the flights of the Hawks as they went forth to hunt—returned with their game—exercised themselves in wheeling round and round and circling about it, were amusing to the beholder almost from morning to night. The family of these Hawks, old and young, was killed by the Hessian *Jagers*. A succeeding pair took possession of the nest; but in the course of time, the prongs of the trunk so rotted away, that the nest could no longer be supported. The Hawks have been obliged to seek new quarters. We have lost this part of our prospect; and our trees have not afforded a convenient site for one of their habitations since."

About the first of May the female Fish-Hawk begins to lay her eggs, which are commonly three in number, sometimes only two,

and rarely four. They are somewhat larger than those of the common hen, and nearly of the same shape. The ground color varies, in different eggs, from a reddish cream, to nearly a white, splashed and daubed all over with dark Spanish brown, as if done by art.* During the time the female is sitting, the male frequently supplies her with fish; tho she occasionally takes a short circuit to sea herself, but quickly returns again. The attention of the male, on such occasions, is regulated by the circumstances of the case. A pair of these birds, on the south side of Great Egg-Harbour river, and near its mouth, were noted for several years. The female having but one leg was regularly furnished, while sitting, with fish in such abundance, that she seldom left the nest, and never to seek for food. This kindness was continued both before and after incubation. Some animals who claim the name and rationality of man might blush at the recital of this fact.

On the appearance of the young, which is usually about the last of June, the zeal and watchfulness of the parents are extreme. They stand guard, and go off to fish, alternately; one parent being always within a short distance of the nest. On the near approach of any person the Hawk utters a plaintive whistling note, which becomes shriller as she takes to wing, and sails around, sometimes making a rapid descent, as if aiming directly for you; but checking her course and sweeping past at a short distance over head, her wings making a loud whizzing in the air. My worthy friend Mr.

* Of the palatableness of these eggs I cannot speak from personal experience; but the following incident will shew that the experiment has actually been made. A country fellow, near Cape May, on his way to a neighbouring tavern, passing a tree on which was a Fish-Hawk's nest, immediately mounted and robbed it of the only egg it contained, which he carried with him to the tavern, and desired the landlord to make it into *egg-nogg*. The tavern-keeper, after a few wry faces, complied with his request, and the fellow swallowed the cordial; but, whether from its effects on the olfactory nerves (for he said it smelt abominably) the imagination, or on the stomach alone, is uncertain, it operated as a most outrageous emetic, and cured the man, for that time at least, of his thirst for *egg-nogg*. What is rather extraordinary, the landlord (Mr. Beasley) assured me, that to all appearance the egg was perfectly fresh.

Gardiner informs me, that they have even been known to fix their claws in a negro's head who was attempting to climb to their nest; and I had lately a proof of their daring spirit in this way, through the kindness of a friend, resident for a few weeks at Great Egg-Harbour. I had requested of him the favor to transmit me, if possible, a live Fish-Hawk, for the purpose of making a drawing of it, which commission he very faithfully executed; and I think I cannot better illustrate this part of the bird's character than by quoting his letter at large.

“Beasley’s, Great Egg-Harbour, June 30th, 1811.

“SIR,

“Mr. Beasley and I went to reconnoitre a Fish-Hawk’s nest on Thursday afternoon. When I was at the nest I was struck with so great violence, on the crown of the hat, that I thought a hole was made in it. I had ascended fearlessly, and never dreamt of being attacked. I came down quickly. There were in the nest three young ones about the size of pullets, which, though full feathered, were unable to fly. On Friday morning I went again to the nest to get a young one, which I thought I could nurse to a considerable growth, sufficient to answer your purpose, if I should fail to procure an old one, which was represented to me as almost impossible, on account of his shyness, and the danger from his dreadful claws. On taking a young one I intended to lay a couple of snares in the nest, for which purpose I had a strong cord in my pocket. The old birds were on the tree when captain H. and I approached it. As a defence, profiting by the experience of yesterday, I took a walking stick with me. When I was about half up the tree, the bird I send you struck at me repeatedly with violence; he flew round, in a small circle, darting at me at every circuit, and I striking at him. Observing that he always described a circle in the air, before he came at me, I kept a *hawk’s eye* upon him, and the moment he passed me, I availed myself of the opportunity to

ascend. When immediately under the nest, I hesitated at the formidable opposition I met, as his rage appeared to increase with my presumption in invading his premises. But I mounted to the nest. At that moment he darted directly at me with all his force, whizzing through the air, his choler apparently redoubled. Fortunately for me, I struck him on the extreme joint of the right wing with my stick, which brought him to the ground. During this contest the female was flying round and round at a respectful distance. Captain H. held him till I tied my handkerchief about his legs; the captain felt the effect of his claws. I brought away a young one to keep the old one in a good humour. I put them in a very large coop; the young one ate some fish, when broken and put into its throat; but the old one would not eat for two days. He continued sullen and obstinate, hardly changing his position. He walks about now, and is approached without danger; he takes very little notice of the young one. A Joseph Smith, working in the field where this nest is, had the curiosity to go up to look at the eggs; the bird clawed his face in a shocking manner; his eye had a narrow escape. I am told that it has never been considered dangerous to approach a Hawk's nest. If this be so, this bird's character is peculiar; his affection for his young, and his valiant opposition to an invasion of his nest, entitle him to conspicuous notice. He is the *Prince* of Fish-Hawks; his character and his portrait seem worthy of being handed to the historic muse. A Hawk more worthy of the honor which awaits him could not have been found. I hope no accident will happen to him, and that he may fully answer your purpose.

“ Yours,

“ THOMAS SMITH.

“ This morning the female was flying to and fro, making a mournful noise.”

The young of the Fish-Hawk are remarkable for remaining long in the nest before they attempt to fly. Mr. Smith's letter is dated June 30th, at which time, he observes, they were as large as pullets, and full feathered. Seventeen days after, I myself ascended to this same Hawk's nest, where I found the two remaining young ones seemingly full grown. They made no attempts to fly, though they both placed themselves in a stern posture of defence as I examined them at my leisure. The female had procured a *second* helpmate; but he did not seem to inherit the spirit of his predecessor, for like a true step-father, he left the nest at my approach, and sailed about at a safe distance with his mate, who shewed great anxiety and distress during the whole of my visit. It is universally asserted by the people of the neighbourhood where these birds breed, that the young remain so long, before they fly, that the parents are obliged at last to compel them to shift for themselves, beating them with their wings, and driving them from the nest. But that they continue to assist them even after this, I know to be a fact from my own observation, as I have seen the young bird meet its parent in the air, and receive from him the fish he carried in his claws.

The flight of the Fish-Hawk, his manœuvres while in search of fish, and his manner of seizing his prey, are deserving of particular notice. In leaving the nest he usually flies direct till he comes to the sea, then sails around, in easy curving lines, turning sometimes in the air as on a pivot, apparently without the least exertion, rarely moving the wings, his legs extended in a straight line behind, and his remarkable length and curvature or bend of wing, distinguishing him from all other Hawks. The height at which he thus elegantly glides is various, from one hundred to one hundred and fifty, and two hundred feet, sometimes much higher, all the while calmly reconnoitring the face of the deep below. Suddenly he is seen to check his course, as if struck by a particular object, which he seems to survey for a few moments with such steadiness

that he appears fixed in air, flapping his wings. This object however he abandons, or rather the fish he had in his eye has disappeared, and he is again seen sailing around as before. Now his attention is again arrested, and he descends with great rapidity; but ere he reaches the surface, shoots off on another course, as if ashamed that a second victim had escaped him. He now sails at a short height above the surface, and by a zig-zag descent and without seeming to dip his feet in the water, seizes a fish, which after carrying a short distance, he probably drops, or yields up to the Bald Eagle, and again ascends, by easy spiral circles, to the higher regions of the air, where he glides about in all the ease and majesty of his species. At once from this sublime aerial height he descends like a perpendicular torrent, plunging into the sea with a loud rushing sound, and with the certainty of a rifle. In a few moments he emerges, bearing in his claws his struggling prey, which he always carries head foremost, and having risen a few feet above the surface, shakes himself as a water spaniel would do, and directs his heavy and laborious course directly for the land. If the wind blow hard, and his nest lie in the quarter from whence it comes, it is amusing to observe with what judgment and exertion he beats to windward, not in a direct line, that is, *in the wind's eye*, but making several successive tacks to gain his purpose. This will appear the more striking when we consider the size of the fish which he sometimes bears along. A shad was taken from a Fish-Hawk near Great Egg-Harbour, on which he had begun to regale himself, and had already ate a considerable portion of it, the remainder weighed six pounds. Another Fish-Hawk was passing Mr. Beasley's, at the same place, with a large flounder in his grasp, which struggled and shook him so, that he dropt it on the shore. The flounder was picked up, and served the whole family for dinner. It is singular that the Hawk never descends to pick up a fish which he happens to drop, either on the land or on the water. There is a kind of abstemious dignity in this habit of the Hawk, superior to the glutinous vo-

racity displayed by most other birds of prey, particularly by the Bald Eagle, whose piratical robberies committed on the present species have been already fully detailed in treating of his history. The Hawk, however, in his fishing pursuits, sometimes mistakes his mark, or overrates his strength, by striking fish too large and powerful for him to manage, by whom he is suddenly dragged under; and tho he sometimes succeeds in extricating himself, after being taken three or four times down, yet oftener both parties perish. The bodies of sturgeon, and several other large fish, with that of the Fish-Hawk fast grappled in them, have at different times been found dead on the shore cast up by the waves.

The Fish-Hawk is doubtless the most numerous of all its genus within the United States. It penetrates far into the interior of the country up our large rivers, and their head waters. It may be said to line the sea-coast from Georgia to Canada. In some parts I have counted at one view, more than twenty of their nests within half a mile. Mr. Gardiner informs me, that on the small island on which he resides there are at least "three hundred nests of Fish-Hawks that have young, which, on an average, consume probably not less than six hundred fish daily." Before they depart in the autumn they regularly repair their nests, carrying up sticks, sods, &c. fortifying them against the violence of the winter storms, which, from this circumstance, they would seem to foresee and expect. But, notwithstanding all their precautions, they frequently on their return in spring find them lying in ruins around the roots of the tree; and sometimes the tree itself has shared the same fate. When a number of Hawks, to the amount of twenty or upwards, collect together on one tree, making a loud squeeling noise, there is generally a nest built soon after on the same tree. Probably this congressional assembly were settling the right of the new pair to the premises; or it might be a kind of wedding, or joyous festive meeting on the occasion. They are naturally of a mild and peaceable disposition, living together in great peace and harmony; for tho

with them, as in the best regulated communities, instances of attack and robbery occur among themselves, yet these instances are extremely rare. Mr. Gardiner observes that they are sometimes seen high in the air, sailing and cutting strange gambols with loud vociferations, darting down several hundred feet perpendicular, frequently with part of a fish in one claw, which they seem proud of, and to claim *high hook* as the fishermen call *him* who takes the greatest number. On these occasions they serve as a barometer to foretel the changes of the atmosphere; for when the Fish-Hawks are seen thus, sailing high in air, in circles, it is universally believed to prognosticate a change of weather, often a thunder storm, in a few hours. On the faith of the certainty of these signs, the experienced coaster wisely prepares for the expected storm, and is rarely mistaken.

There is one singular trait in the character of this bird, which was mentioned in treating of the Purple Grackle, and which I have since had many opportunities of witnessing. The Grakles, or Crow Blackbirds, are permitted by the Fish-Hawk to build their nests among the interstices of the sticks of which his own is constructed. Several pair of Grakles taking up their abode there, like humble vassals around the castle of their chief, laying, hatching their young, and living together in mutual harmony. I have found no less than four of these nests clustered around the sides of the former, and a fifth fixed on the nearest branch of the adjoining tree; as if the proprietor of this last, unable to find an unoccupied corner on the premises, had been anxious to share as much as possible the company and protection of this generous bird.

The Fish-Hawk is twenty-two inches in length, and five feet three inches in extent; the bill is deep black, the upper as well as lower cere (for the base of the lower mandible has a loose moveable skin) and also the sides of the mouth, from the nostrils backwards, are light blue; crown and hind head pure white, front streaked with brown; through the eye a bar of dark blackish brown passes

to the neck behind, which, as well as the whole upper parts is deep brown, the edges of the feathers lighter; shafts of the wing quills brownish white; tail slightly rounded, of rather a paler brown than the body, crossed with eight bars of very dark brown; the wings when shut extend about an inch beyond the tail, and are nearly black towards the tips; the inner vanes of both quill and tail feathers are whitish, barred with brown; whole lower parts pure white except the thighs, which are covered with short plumage and streaked down the fore part with pale brown; the legs and feet are a very pale light blue, prodigiously strong and disproportionately large, they are covered with flat scales of remarkable strength and thickness, resembling when dry the teeth of a large rasp, particularly on the soles, intended no doubt to enable the bird to seize with more security his slippery prey; the thighs are long, the legs short, feathered a little below the knee, and as well as the feet and claws large; the latter hooked into semicircles, black, and very sharp pointed; the iris of the eye a fiery yellow orange.

The female is full two inches longer; the upper part of the head of a less pure white, and the brown streaks on the front spreading more over the crown; the throat and upper part of the breast are also dashed with large blotches of a pale brown, and the bar passing through the eye, not of so dark a brown. The toes of both are exceedingly strong and warty, and the hind claw a full inch and a quarter in diameter. The feathers on the neck and hind head are long and narrow, and generally erected when the bird is irritated, resembling those of the Eagle. The eye is destitute of the projecting bone common to most of the Falcon tribe, the nostril large, and of a curving triangular shape. On dissection the two glands on the rump which supply the bird with oil for lubricating its feathers to protect them from the wet, were found to be remarkably large, capable when opened of admitting the end of the finger and contained a large quantity of white greasy matter, and some pure yellow oil; the gall was in small quantity; the numerous convolutions and

length of the intestines surprised me; when carefully extended they measured within an inch or two of nine feet, and were no thicker than those of a Robin! The crop, or craw, was middle sized, and contained a nearly dissolved fish; the stomach was a large oblong pouch, capable of considerable distension, and was also filled with half digested fish; no appearance of a muscular gizzard.

By the descriptions of European naturalists it would appear, that this bird, or one near a-kin to it, is a native of the Eastern continent in summer, as far north as Siberia; the Bald Buzzard of Turton almost exactly agreeing with the present species in size, color, and manners, with the exception of its breeding or making its nest among the reeds, instead of on trees. Mr. Bewick, who has figured and described the female of this bird under the appellation of the "Osprey," says, "that it builds on the ground, among reeds, and lays three or four eggs of an elliptical form, rather less than those of a hen." This difference of habit may be owing to particular local circumstances, such deviations being usual among many of our native birds. The Italians are said to compare its descent upon the water to a piece of lead falling upon that element; and distinguish it by the name of *Aquila piumbina*, or the Leaden Eagle. In the United States it is every where denominated the Fish-Hawk, or Fishing-Hawk, a name truly expressive of its habits.

The regular arrival of this noted bird at the vernal equinox, when the busy season of fishing commences, adds peculiar interest to its first appearance, and procures it many a benediction from the fishermen. With the following lines, illustrative of these circumstances, I shall conclude its history.

Soon as the Sun, great ruler of the year!
Bends to our northern climes his bright career,
And from the caves of ocean calls from sleep.
The finny shoals and myriads of the deep;

When freezing tempests back to Greenland ride;
 And day and night the equal hours divide;
 True to the season, o'er our sea-beat shore,
 The sailing Osprey high is seen to soar
 With broad unmoving wing; and, circling slow,
 Marks each loose straggler in the deep below:
 Sweeps down like lightning! plunges with a roar!
 And bears his struggling victim to the shore.

The long-hous'd fisherman beholds with joy,
 The well known signals of his rough employ;
 And, as he bears his nets and oars along,
 Thus hails the welcome season with a song.

THE FISHERMAN'S HYMN.

The Osprey sails above the sound;
 The geese are gone—the gulls are flying;
 The herring shoals swarm thick around,
 The nets are launch'd—the boats are plying;
 Yo ho, my hearts! let's seek the deep,
 Raise high the song, and cheerly wish her,
 Still as the bending net we sweep,
 "God bless the Fish-Hawk and the fisher!"

She brings us fish—she brings us spring,
 Good times, fair weather, warmth and plenty,
 Fine store of *shad, trout, herring, ling,*
Sheepshead and drum, and old-wives dainty.
 Yo ho, my hearts! let's seek the deep,
 Ply every oar, and cheerly wish her,
 Still as the bending net we sweep,
 "God bless the Fish-Hawk and the fisher!"

She rears her young on yonder tree,
She leaves her faithful mate to mind 'em;
Like us, for fish, she sails to sea,
And, plunging, shews us where to find 'em.
Yo ho, my hearts! let's seek the deep,
Ply ev'ry oar and cheerly wish her,
While the slow bending net we sweep,
"God bless the Fish-Hawk and the fisher!"

FISH CROW.

CORVUS OSSIFRAGUS.

[Plate XXXVII.—Fig. 2.]

PEALE'S *Museum*, No. 1369.

THIS is another roving inhabitant of our sea-coasts, ponds, and river shores; tho a much less distinguished one than the preceding, this being the first time, as far as I can learn, that he has ever been introduced to the notice of the world.

I first met with this species on the sea-coast of Georgia, and observed that they regularly retired to the interior as evening approached, and came down to the shores of the river Savannah by the first appearance of day. Their voice first attracted my notice, being very different from that of the common Crow, more hoarse and guttural, uttered as if something stuck in their throat, and varied into several modulations as they flew along. Their manner of flying was also unlike the others, as they frequently sailed about, without flapping the wings, something in the manner of the Raven; and I soon perceived that their food, and their mode of procuring it, were also both different; their favorite haunts being about the banks of the river, along which they usually sailed, dexterously snatching up, with their claws, dead fish or other garbage that floated on the surface. At the country seat of Stephen Elliot, esq. near the Ogeechee river, I took notice of these Crows frequently perching on the backs of the cattle, like the Magpie and Jackdaw of Britain; but never mingling with the common Crows, and differing from them in this particular, that the latter generally retire to the shore, the reeds and marshes to roost, while the Fish-Crow always a little before sun-set seeks the interior high woods to repose in.

On my journey through the Mississippi territory, last year, I resided for some time at the seat of my hospitable friend Dr. Samuel Brown, a few miles from Fort Adams on the Mississippi. In my various excursions there among the lofty fragrance-breathing magnolia woods, and magnificent scenery that adorn the luxuriant face of nature in those southern regions, this species of Crow frequently made its appearance, distinguished by the same voice and habits it had in Georgia. There is in many of the ponds there, a singular kind of lizard, that swims about with its head above the surface, making a loud sound, not unlike the harsh jarring of a door. These the Crow now before us would frequently seize with his claws, as he flew along the surface, and retire to the summit of a dead tree to enjoy his repast. Here I also observed him a pretty constant attendant at the pens where the cows were usually milked, and much less shy, less suspicious, and more solitary than the common Crow. In the county of Cape May, New Jersey, I again met with these Crows, particularly along Egg-Harbour river; and latterly on the Schuylkill and Delaware, near Philadelphia, during the season of shad and herring fishing, *viz.* from the middle of March till the beginning of June. A small party of these Crows, during this period, regularly passed Mr. Bartram's gardens to the high woods to roost, every evening a little before sun-set, and as regularly returned at or before sun-rise every morning, directing their course towards the river. The fishermen along these rivers also inform me, that they have particularly remarked this Crow, by his croaking voice, and his fondness for fish; almost always hovering about their fishing places to glean up the refuse. Of their manner of breeding I can only say, that they separate into pairs, and build in tall trees near the sea or river shore; one of their nests having been built this season in a piece of tall woods near Mr. Beasley's, at Great Egg-Harbour. The male of this nest furnished me with the figure in the plate, which was drawn of full size, and afterwards reduced to one-third the size of life, to correspond with the rest of

the figures on the same plate. From the circumstance of six or seven being usually seen here together, in the month of July, it is probable that they have at least four or five young at a time.

I can find no description of this species by any former writer. Mr. Bartram mentions a bird of this tribe which he calls the *Great Sea-side Crow*; but the present species is considerably inferior in size to the common Crow, and having myself seen and examined it in so many and remotely situated parts of the country, and found it in all these places alike, I have no hesitation in pronouncing it to be a new and hitherto undescribed species.

The Fish-Crow is sixteen inches long, and thirty-three in extent; black all over, with reflections of steel-blue and purple; the chin is bare of feathers around the base of the lower mandible; upper mandible notched near the tip, the edges of both turned inwards about the middle; eye very small, placed near the corner of the mouth, and of a dark hazel color; recumbent hairs or bristles large and long, ear feathers prominent, first primary little more than half the length, fourth the longest; wings when shut reach within two inches of the tip of the tail; tail rounded, and seven inches long from its insertion; thighs very long; legs stout; claws sharp, long and hooked, hind one the largest, all jet black. Male and female much alike.

I would beg leave to recommend to the watchful farmers of the United States, that in their honest indignation against the common Crow, they would spare the present species, and not shower destruction indiscriminately on their black friends and enemies; at least on those who *sometimes* plunder them, and those who never molest or injure their property.

RINGED PLOVER.

CHARADRIUS HIATICULA.

[Plate XXXVII.—Fig. 3.]

LATH. *Syn.* V, p. 201. 8.—*Arct. Zool.* II, No. 401.—*Petit Pluvier, à collier*, BUFF. VIII, p. 90—6. *Pl. enl.* 921.—*Pluvialis Torquata minor*, BRISS. V, p. 63. 8. t. 5. f. 2.—TURT. *Syst.* p. 411. 2.—PEALE's *Museum*, No. 4150.

IT was not altogether consistent with my original plan to introduce any of the *Grallæ* or Waders, until I had advanced nearer to a close with the Land Birds; but as the scenery here seemed somewhat appropriate, I have taken the liberty of placing in it two birds, reduced to one-third of their natural size, both being *varieties* of their respective species, each of which will appear in their proper places, in some future volume of this work, in full size and in their complete plumage.

The Ringed Plover is very abundant on the low sandy shores of our whole sea-coast, during summer. They run, or rather seem to glide, rapidly along the surface of the flat sands; frequently spreading out their wings and tail like a fan, and fluttering along, to draw or entice one away from their nests. These are formed with little art; being merely shallow concavities dug in the sand, in which the eggs are laid, and, during the day at least, left to the influence of the sun to hatch them. The parents, however, always remain near the spot to protect them from injury, and probably in cold rainy or stormy weather, to shelter them with their bodies. The eggs are three, sometimes four, large for the bird, of a dun clay color, and marked with numerous small spots of reddish purple.

The voice of these little birds, as they move along the sand, is soft and musical, consisting of a single plaintive note occasionally

repeated. As you approach near their nests, they seem to court your attention, and the moment they think you observe them, they spread out their wings and tail, dragging themselves along, and imitating the squeaking of young birds; if you turn from them they immediately resume their proper posture until they have again caught your eye, when they display the same attempts at deception as before. A flat dry sandy beach, just beyond the reach of the summer tides, is their favorite place for breeding.

This species is subject to great variety of change in its plumage. In the month of July I found most of those that were breeding on Summers's Beach, at the mouth of Great Egg-Harbour, such as I have here figured; but about the beginning or middle of October they had become much darker above, and their plumage otherwise varied. They were then collected in flocks; their former theatrical and deceptive manœuvres seemed all forgotten. They appeared more active than before, as well as more silent; alighting within a short distance of one, and feeding about without the least appearance of suspicion. At the commencement of winter they all go off towards the south.

This variety of the Ringed Plover is seven inches long, and fourteen in extent; the bill is reddish yellow for half its length, and black at the extremity; the front and whole lower parts pure white, except the side of the breast, which is marked with a curving streak of black, another spot of black bounding the front above; back and upper parts very pale brown, inclining to ashy white, and intermixed with white; wings pale brown, greater coverts broadly tipped with white; interior edges of the secondaries, and outer edges of the primaries white, and tipped with brown; tail nearly even, the lower half white, brown towards the extremity, the outer feather pure white, the next white with a single spot of black; eye black, and full, surrounded by a narrow ring of yellow; legs reddish yellow; claws black; lower side of the wings pure white.

LITTLE SANDPIPER.

TRINGA PUSILLA.

[Plate XXXVII.—Fig. 4.]

LATH. *Syn. V*, p. 184—32.—*Arct. Zool. II*, No. 397.—*Cinclus dominicensis minor*, BRISS. V, p. 222. 13. t. 25. f. 2.—TURT. *Syst. p. 410*.—PEALE's *Museum*, No. 4138.

THIS is the least of its tribe in this part of the world, and in its mode of flight has much more resemblance to the Snipe than to the Sandpiper. It is migratory, departing early in October for the south. It resides chiefly among the sea marshes, and feeds among the mud at low water; springs with a zig-zag irregular flight, and a feeble twit. It is not altogether confined to the neighbourhood of the sea, for I have found several of them on the shores of the Schuylkill, in the month of August. In October, immediately before they go away, they are usually very fat. Their nests or particular breeding places I have not been able to discover.

This minute species is found in Europe, and also at Nootka sound on the western coast of America. Length five inches and a half; extent eleven inches; bill and legs brownish black; upper part of the breast grey brown, mixed with white; back and upper parts black; the whole plumage above broadly edged with bright bay and yellow ochre; primaries black; greater coverts the same, tipped with white; eye small, dark hazel; tail rounded, the four exterior feathers on each side dull white, the rest dark brown; tertials as long as the primaries; head above dark brown with paler edges; over the eye a streak of whitish; belly and vent white; the bill is thick at the base, and very slender towards the point; the hind toe small. In some specimens the legs were of a dirty yellowish color.

Sides of the rump white; just below the greater coverts the primaries are crossed with white.

Very little difference could be perceived between the plumage of the males and females. The bay on the edges of the back and scapulars was rather brighter in the male, and the brown deeper.

BARN SWALLOW.

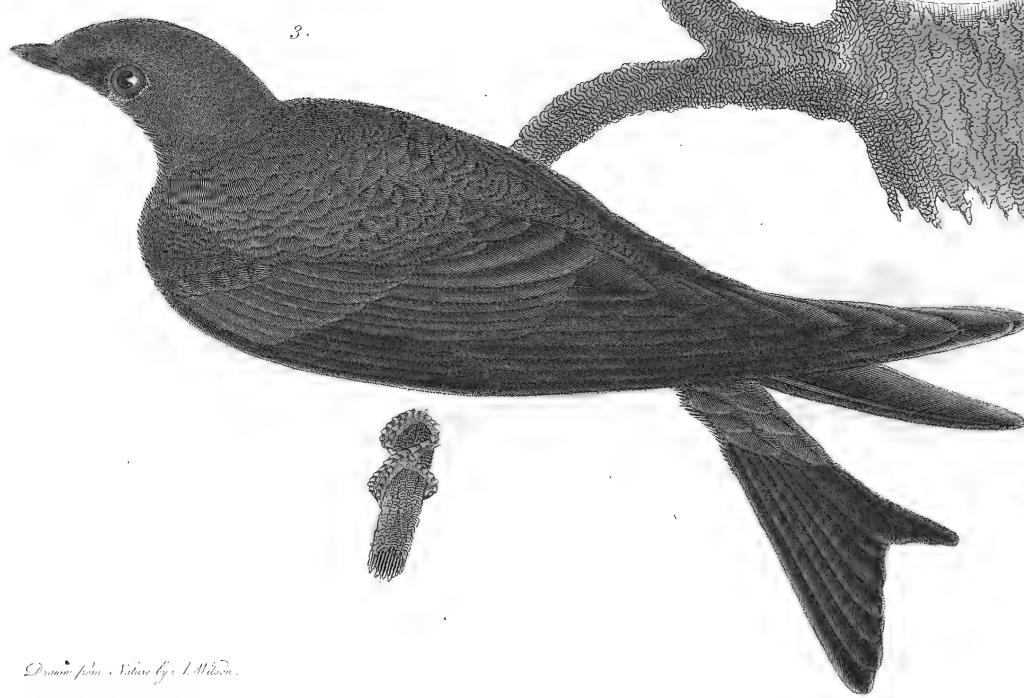
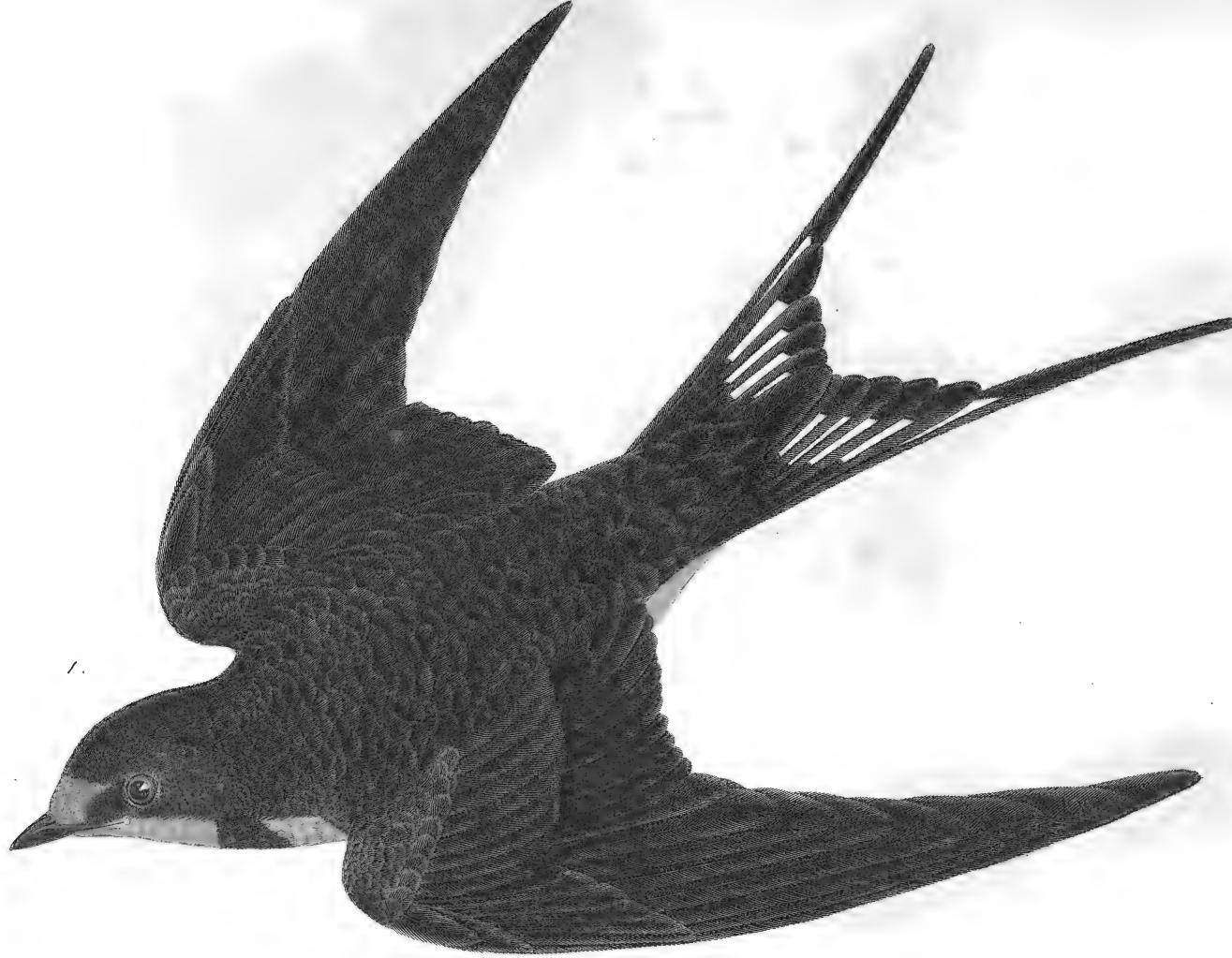
HIRUNDO AMERICANA.

[Plate XXXVIII.—Fig. 1, *Male*.—Fig. 2, *Female*.]

PEALE's *Museum*, No. 7609.

THERE are but few persons in the United States unacquainted with this gay, innocent, and active little bird. Indeed the whole tribe are so distinguished from the rest of small birds by their sweeping rapidity of flight, their peculiar aerial evolutions of wing over our fields and rivers, and through our very streets, from morning to night, that the light of heaven itself, the sky, the trees, or any other common objects of nature, are not better known than the Swallows. We welcome their first appearance with delight, as the faithful harbingers and companions of flowery spring, and ruddy summer; and when, after a long, frost-bound and boisterous winter, we hear it announced, that "*The Swallows are come*," what a train of charming ideas are associated with the simple tidings!

The wonderful activity displayed by these birds forms a striking contrast to the slow habits of most other animals. It may be fairly questioned whether among the whole feathered tribes which heaven has formed to adorn this part of creation, there be any that, in the same space of time, pass over an equal extent of surface with the Swallow. Let a person take his stand on a fine summer evening by a new mown field, meadow or river shore for a short time, and among the numerous individuals of this tribe that fit before him fix his eye on a particular one, and follow, for a while, all its circuitous labyrinths—its extensive sweeps—its sudden, rapidly reiterated zig-zag excursions, little inferior to the lightning itself, and then attempt by the powers of mathematics to calculate the length



Dramm from Nature by J. Wilson.

Engraved by J. Martin.

1. Barn Swallow. 2. Female. 3. White-bellied S. 4. Bank S.

of the various lines it describes. Alas! even his omnipotent fluxions would avail him little here, and he would soon abandon the task in despair. Yet, that some definite conception may be formed of this extent, let us suppose, that this little bird flies, in his usual way, at the rate of one mile in a minute, which, from the many experiments I have made, I believe to be within the truth; and that he is so engaged for ten hours every day; and further, that this active life is extended to ten years (many of our small birds being known to live much longer even in a state of domestication), the amount of all these, allowing three hundred and sixty-five days to a year, would give us two million one hundred and ninety thousand miles; upwards of eighty-seven times the circumference of the globe! Yet this little *winged seraph*, if I may so speak, who, in a few days, and at will, can pass from the borders of the arctic regions to the torrid zone, is forced when winter approaches to descend to the bottoms of lakes, rivers, and mill ponds to bury itself in the mud with eels and snapping turtles; or to creep ingloriously into a cavern, a rat hole, or a hollow tree, there to doze with snakes, toads, and other reptiles until the return of spring! Is not this true ye wise men of Europe and America, who have published so many *credible* narratives on this subject? The Geese, the Ducks, the Catbird, and even the Wren which creeps about our outhouses in summer like a mouse, are all acknowledged to be migratory, and to pass to southern regions at the approach of winter;—the Swallow alone, on whom heaven has conferred superior powers of wing, must sink in torpidity at the bottom of our rivers, or doze all winter in the caverns of the earth. I am myself something of a traveller, and foreign countries afford many novel sights: should I assert, that in some of my peregrinations I had met with a nation of Indians, all of whom, old and young, at the commencement of cold weather, descend to the bottom of their lakes and rivers, and there remain until the breaking up of frost; nay, should I affirm, that thousands of people in the neighbourhood of this city, regularly undergo the

same semi-annual submersion—that I myself had fished up a whole family of these from the bottom of Schuylkill, where they had lain *torpid* all winter, carried them home, and brought them all comfortably to themselves again. Should I even publish this in the learned pages of the Transactions of our Philosophical Society, who would believe me? Is then the organization of a Swallow less delicate than that of a man? Can a bird, whose vital functions are destroyed by a short privation of pure air and its usual food, sustain, for six months, a situation where the most robust man would perish in a few hours or minutes? Away with such absurdities!—They are unworthy of a serious refutation. I should be pleased to meet with a man who has been personally more conversant with birds than myself, who has followed them in their wide and devious routes—studied their various manners—mingled with and marked their peculiarities more than I have done; yet the miracle of a resuscitated swallow, in the depth of winter, from the bottom of a mill pond, is, I confess, a phenomenon in ornithology that I have never met with.

What better evidence have we that these fleet-winged tribes, instead of following the natural and acknowledged migrations of many other birds, lie torpid all winter in hollow trees, caves and other subterraneous recesses? That the Chimney Swallow, in the early part of summer, may have been found in a hollow tree, and in great numbers too, is not denied; such being in some places of the country (as will be shewn in the history of that species,) their actual places of rendezvous, on their first arrival, and their common roosting place long after; or that the Bank Swallows, also, soon after their arrival, in the early part of spring, may be chilled by the cold mornings which we frequently experience at that season, and be found in this state in their holes, I would as little dispute; but that either the one or the other has ever been found, *in the midst of winter* in a state of *torpidity*, I do not, cannot believe. Millions of trees of all dimensions are cut down every fall and win-

ter of this country, where, in their proper season, Swallows swarm around us. Is it therefore in the least probable that we should, only once or twice in an age, have no other evidence than one or two solitary and very suspicious reports of a Mr. Somebody having made a discovery of this kind? If caves were their places of winter retreat, perhaps no country on earth could supply them with a greater choice. I have myself explored many of these in various parts of the United States both in winter and in spring, particularly in that singular tract of country in Kentucky, called the *Barrens*, where some of these subterraneous caverns are several miles in length, lofty and capacious, and pass under a large and deep river —have conversed with the saltpetre workers by whom they are tenanted; but never heard or met with one instance of a Swallow having been found there in winter. These people treated such reports with ridicule.

It is to be regretted that a greater number of experiments have not been made, by keeping live Swallows through the winter, to convince these believers in the torpidity of birds, of their mistake. That class of cold-blooded animals which are *known* to become torpid during winter, and of which hundreds and thousands are found every season, are subject to the same when kept in a suitable room for experiment. How is it with the Swallows in this respect? Much powerful testimony might be produced on this point; the following experiments recently made by Mr. James Pearson of London, and communicated by Sir John Trevelyn, bart. to Mr. Bewick, the celebrated engraver in wood, will be sufficient for our present purpose, and throw great light on this part of the subject.*

“ Five or six of these birds were taken about the latter end of August, 1784, in a bat fowling net at night; they were put separately into small cages, and fed with nightingale’s food: in about a week or ten days they took food of themselves; they were then put

* See Bewick’s British Birds, vol. i, p. 254.

altogether into a deep cage, four feet long, with gravel at the bottom; a broad shallow pan with water was placed in it, in which they sometimes washed themselves, and seemed much strengthened by it. One day Mr. Pearson observed that they went into the water with unusual eagerness, hurrying in and out again repeatedly with such swiftness as if they had been suddenly seized with a frenzy. Being anxious to see the result, he left them to themselves about half an hour, and going to the cage again found them all huddled together in a corner apparently dead; the cage was then placed at a proper distance from the fire, when only two of them recovered and were as healthy as before—the rest died. The two remaining ones were allowed to wash themselves occasionally for a short time only; but their feet soon after became swelled and inflamed, which Mr. P. attributed to their perching, and they died about Christmas. Thus the first year's experiment was in some measure lost. Not discouraged by the failure of this, Mr. P. determined to make a second trial the succeeding year, from a strong desire of being convinced of the truth of their going into a state of torpidity. Accordingly the next season having taken some more birds he put them into the cage, and in every respect pursued the same methods as with the last; but to guard their feet from the bad effects of the damp and cold he covered the perches with flannel, and had the pleasure to observe that the birds thrrove extremely well; they sung their song during the winter, and soon after Christmas began to moult, which they got through without any difficulty, and lived three or four years, regularly moulting every year at the usual time. On the renewal of their feathers it appeared that their tails were forked exactly the same as in those birds which return hither in the spring, and in every respect their appearance was the same. These birds, says Mr. Pearson, were exhibited to the Society for promoting Natural History, on the fourteenth day of February, 1786, at the time they were in a deep moult, during a severe frost, when the snow was on the ground. Minutes of this circumstance

were entered in the books of the society. These birds died at last from neglect, during a long illness which Mr. Pearson had: they died in the summer. Mr. P. concludes his very interesting account in these words: January 20th, 1797, I have now in my house, No. 21, Great Newport street, Long Acre, four Swallows in moult, in as perfect health as any birds ever appeared to be when moulting."

The Barn Swallow of the United States has hitherto been considered by many writers as the same with the common Chimney Swallow of Europe. They differ however considerably, in color, as well as in habits; the European species having the belly and vent white, the American species those parts of a bright chesnut; the former building in the corners of chimneys, near the top, the latter never in such places; but usually in barns, sheds, and other outhouses, on beams, braces, rafters, &c. It is difficult to reconcile these constant differences of manners and markings in one and the same bird; I shall therefore take the liberty of considering the present as a separate and distinct species.

The Barn Swallow arrives in this part of Pennsylvania from the south on the last week in March, or the first week in April, and passes on to the north as far, at least, as the river St. Lawrence. On the east side of the great range of the Alleghany, they are dispersed very generally over the country, wherever there are habitations, even to the summit of high mountains; but, on account of the greater coldness of such situations, are usually a week or two later in making their appearance there. On the sixteenth of May, being on a shooting expedition on the top of Pocano mountain, Northampton, when the ice on that and on several successive mornings was more than a quarter of an inch thick, I observed with surprise a pair of these Swallows which had taken up their abode on a miserable cabin there. It was then about sun-rise, the ground white with hoar frost, and the male was twittering on the roof by the side of his mate with great sprightliness. The man of the house told me that a single pair came regularly there every sea-

son, and built their nest on a projecting beam under the eaves, about six or seven feet from the ground. At the bottom of the mountain, in a large barn belonging to the tavern there, I counted upwards of twenty nests, all seemingly occupied. In the woods they are never met with; but as you approach a farm they soon catch the eye, cutting their gambols in the air. Scarcely a barn, to which these birds can find access, is without them; and as public feeling is universally in their favour, they are seldom or never disturbed. The proprietor of the barn last mentioned, a German, assured me, that if a man permitted the Swallows to be shot his cows would give bloody milk, and also that no barn where Swallows frequented would ever be struck with lightning; and I nodded assent. When the tenets of superstition "lean to the side of humanity" one can readily respect them. On the west side of the Alleghany these birds become more rare. In travelling through the states of Kentucky and Tennessee, from Lexington to the Tennessee river, in the months of April and May, I did not see a single individual of this species; tho the Purple Martin, and, in some places, the Bank Swallow was numerous.

Early in May they begin to build. From the size and structure of the nest it is nearly a week before it is completely finished. One of these nests, taken on the twenty-first of June from the rafter to which it was closely attached, is now lying before me. It is in the form of an inverted cone with a perpendicular section cut off on that side by which it adhered to the wood. At the top it has an extension of the edge, or offset, for the male or female to sit on occasionally, as appeared by the dung; the upper diameter was about six inches by five, the height externally seven inches. This shell is formed of mud, mixed with fine hay as plasterers do their mortar with hair, to make it adhere the better; the mud seems to have been placed in regular strata, or layers, from side to side; the hollow of this cone (the shell of which is about an inch in thickness) is filled with fine hay, well stuffed in; above that is laid a

handful of very large downy geese feathers; the eggs are five, white, specked and spotted all over with reddish brown. Owing to the semi-transparency of the shell the eggs have a slight tinge of flesh color. The whole weighs about two pounds.

They have generally two brood in the season. The first make their appearance about the second week in June; and the last brood leave the nest about the tenth of August. Tho it is not uncommon for twenty, and even thirty pair, to build in the same barn, yet every thing seems to be conducted with great order and affection; all seems harmony among them, as if the interest of each were that of all. Several nests are often within a few inches of each other; yet no appearance of discord or quarrelling takes place in this peaceful and affectionate community.

When the young are fit to leave the nest, the old ones entice them out by fluttering backwards and forwards, twittering and calling to them every time they pass; and the young exercise themselves, for several days, in short essays of this kind, *within doors*, before they first venture abroad. As soon as they leave the barn they are conducted by their parents to the trees, or bushes, by the pond, creek, or river shore, or other suitable situation, where their proper food is most abundant, and where they can be fed with the greatest convenience to both parties. Now and then they take a short excursion themselves, and are also frequently fed while on wing by an almost instantaneous motion of both parties, rising perpendicularly in air and meeting each other. About the middle of August they seem to begin to prepare for their departure. They assemble on the roof in great numbers, dressing and arranging their plumage, and making occasional essays, twittering with great cheerfulness. Their song is a kind of sprightly warble, sometimes continued for a considerable time. From this period to the eighth of September they are seen near the Schuylkill and Delaware, every afternoon, for two or three hours before sun-set, passing along to the south in great numbers, feeding as they skim along. I have

counted several hundreds pass within sight in less than a quarter of an hour, all directing their course towards the south. The reeds are now their regular roosting places; and about the middle of September there is scarcely an individual of them to be seen. How far south they continue their route is uncertain; none of them remain in the United States. Mr. Bartram informs me, that during his residence in Florida, he often saw vast flocks of this and our other Swallows, passing from the peninsula towards the south in September and October; and also on their return to the north about the middle of March. It is highly probable, that were the countries to the south of the gulf of Mexico, and as far south as the great river Maranon, visited and explored by a competent naturalist, these regions would be found to be the winter rendezvous of the very birds now before us, and most of our other migratory tribes.

In a small volume which I have lately met with, entitled "An Account of the British settlement of Honduras," by captain George Henderson, of the 5th West India regiment, published in London in 1809, the writer, in treating of that part of its natural history which relates to birds, gives the following particulars. "Myriads of Swallows," says he, "are also the occasional inhabitants of Honduras. The time of their residence is generally confined to the period of the rains, [that is from October to February] after which they totally disappear. There is something remarkably curious and deserving of notice in the ascent of these birds. As soon as the dawn appears they quit their place of rest, which is usually chosen amid the rushes of some watery savanna; and invariably rise to a certain height, in a compact spiral form, and which at a distance often occasions them to be taken for an immense column of smoke. This attained, they are then seen separately to disperse in search of food, the occupation of their day. To those who may have had the opportunity of observing the phenomenon of a water spout, the similarity of evolution, in the ascent of these birds, will

be thought surprisingly striking. The descent, which regularly takes place at sun-set, is conducted much in the same way; but with inconceivable rapidity. And the noise which accompanies this can only be compared to the falling of an immense torrent; or the rushing of a violent gust of wind. Indeed, to an observer it seems wonderful, that thousands of these birds are not destroyed, in being thus propelled to the earth with such irresistible force.”*

How devoutly it is to be wished that the natural history of those regions were more precisely known! So absolutely necessary as it is to the perfect understanding of this department of our own!

The Barn Swallow is seven inches long, and thirteen inches in extent; bill black; upper part of the head, neck, back, rump and tail coverts, steel blue, which descends rounding on the breast; front and chin deep chesnut; belly, vent, and lining of the wing, light chesnut; wings and tail brown black, slightly glossed with reflexions of green; tail greatly forked, the exterior feather on each side an inch and a half longer than the next, and tapering towards the extremity, each feather, except the two middle ones, marked on its inner vane with an oblong spot of white; lores black; eye dark hazel; sides of the mouth yellow; legs dark purple.

The female differs from the male in having the belly and vent rufous white, instead of light chesnut; these parts are also slightly clouded with rufous; and the exterior tail feathers are shorter.

These birds are easily tamed, and soon become exceedingly gentle and familiar. I have frequently kept them in my room for several days at a time, where they employed themselves in catching flies, picking them from my clothes, hair, &c. calling out occasionally as they observed some of their old companions passing the windows.

* Henderson's Honduras, p. 119.

GREEN-BLUE, OR WHITE-BELLIED SWALLOW.

HIRUNDO VIRIDIS.

[Plate XXXVIII.—Fig. 3.]

PEALE's *Museum*, No. 7707.

THIS is the species hitherto supposed by Europeans to be the same with their common Martin, *Hirundo urbica*, a bird no where to be found within the United States. The English Martin is blue black above; the present species greenish blue; the former has the whole rump white, and the legs and feet are covered with short white downy feathers; the latter has nothing of either. That ridiculous propensity in foreign writers, to consider most of our birds as *varieties* of their own, has led them into many mistakes, which it shall be the business of the author of the present work to point out, decisively, wherever he may meet with them.

The White-bellied Swallow arrives in Pennsylvania a few days later than the preceding species. It often takes possession of an apartment in the boxes appropriated to the Purple Martin; and also frequently builds and hatches in a hollow tree. The nest consists of fine loose dry grass, lined with large downy feathers, rising above its surface, and so placed as to curl inwards and completely conceal the eggs. These last are usually four or five in number, and pure white. They also have two brood in the season.

The voice of this species is low and guttural: they are more disposed to quarrel than the Barn Swallows, frequently fighting in the air for a quarter of an hour at a time, particularly in spring, all the while keeping up a low rapid chatter. They also sail more in flying; but during the breeding season frequent the same situations in quest of similar food. They inhabit the northern Atlantic states

as far as the District of Maine, where I have myself seen them; and my friend Mr. Gardiner informs me, that they are found on the coast of Long Island and its neighbourhood. About the middle of July I observed many hundreds of these birds sitting on the flat sandy beach near the entrance of Great Egg-Harbour. They were also very numerous among the myrtles of these low islands, completely covering some of the bushes. One man told me, that he saw one hundred and two shot at a single discharge. For some time before their departure they subsist principally on the myrtle berries (*myrica cerifera*) and become extremely fat. They leave us early in September.

This species appears to have remained hitherto undescribed, owing to the misapprehension before mentioned. It is not perhaps quite so numerous as the preceding, and rarely associates with it to breed, never using mud of any kind in the construction of its nest.

The White-bellied Swallow is five inches and three quarters long, and twelve inches in extent; bill and eye black; upper parts a light glossy greenish blue; wings brown black, with slight reflexions of green; tail forked, the two exterior feathers being about a quarter of an inch longer than the middle ones, and all of a uniform brown black; lores black; whole lower parts pure white; wings when shut extend about a quarter of an inch beyond the tail; legs naked, short and strong, and, as well as the feet, of a dark purplish flesh color; claws stout.

The female has much less of the greenish gloss than the male, the colors being less brilliant; otherwise alike.

BANK SWALLOW, OR SAND MARTIN.

HIRUNDO RIPARIA.

[Plate XXXVIII.—Fig. 4.]

LATH. *Syn. IV*, p. 568—10.—ARCT. *Zool. II*, No. 332.—*L'Hirondelle de rivage*, BUFF. VI, 632. *Pl. enl. 543. f. 2.*—TURT. *Syst. 629.*—PEALE's *Museum*, No. 7637.

THIS appears to be the most sociable with its kind and the least intimate with man, of all our Swallows; living together in large communities of sometimes three or four hundred. On the high sandy bank of a river, quarry, or gravel pit, at a foot or two from the surface, they commonly scratch out holes for their nests, running them in a horizontal direction to the depth of two and sometimes three feet. Several of these holes are often within a few inches of each other, and extend in various strata along the front of the precipice, sometimes for eighty or one hundred yards. At the extremity of this hole a little fine dry grass with a few large downy feathers form the bed on which their eggs, generally five in number, and pure white, are deposited. The young are hatched late in May; and here I have taken notice of the common Crow, in parties of four or five, watching at the entrance of these holes, to seize the first straggling young that should make its appearance. From the clouds of Swallows that usually play round these breeding places, they remind one at a distance of a swarm of bees.

The Bank Swallow arrives here earlier than either of the preceding; begins to build in April, and has commonly two brood in the season. Their voice is a low mutter. They are particularly fond of the shores of rivers, and, in several places along the Ohio, they congregate in immense multitudes. We have sometimes several days of cold rain and severe weather after their arrival in

spring, from which they take refuge in their holes, clustering together for warmth, and have been frequently found at such times in almost a lifeless state with the cold; which circumstance has contributed to the belief that they lie torpid all winter in these recesses. I have searched hundreds of these holes in the months of December and January, but never found a single Swallow, dead, living, or torpid. I met with this bird in considerable numbers on the shores of the Kentucky river, between Lexington and Danville. They likewise visit the sea shore, in great numbers, previous to their departure, which continues from the last of September to the middle of October.

The Bank Swallow is five inches long, and ten inches in extent; upper parts mouse colored, lower white, with a band of dusky brownish across the upper part of the breast; tail forked, the exterior feather slightly edged with whitish; lores and bill black; legs with a few tufts of downy feathers behind; claws fine pointed and very sharp; over the eye a streak of whitish; lower side of the shafts white; wings and tail darker than the body. The female differs very little from the male.

This bird appears to be in nothing different from the European species; from which circumstance, and its early arrival here, I would conjecture that it passes to a high northern latitude on both continents.

CHIMNEY SWALLOW.

HIRUNDO PELASGIA.

[Plate XXXIX.—Fig. 1.]

LATH. *Syn. V*, p. 583—32.—CATESB. *Car. App. t. 8*.—*Hirondeille de la Caroline*, BUFF. VI, p. 700.—*Hirundo Carolinensis*, BRISS. II, p. 501. 9.—*Aculeated Swallow*, ARCT. ZOOL. II, No. 335—18.—TURT. *Syst. p. 630*.—PEALE'S *Museum*, No. 7663.

THIS species is peculiarly our own; and strongly distinguished from all the rest of our Swallows by its figure, flight, and manners. Of the first of these the representation in the plate will give a correct idea; its other peculiarities shall be detailed as fully as the nature of the subject requires.

This Swallow, like all the rest of its tribe in the United States, is migratory, arriving in Pennsylvania late in April or early in May, and dispersing themselves over the whole country wherever there are vacant chimneys in summer sufficiently high and convenient for their accommodation. In no other situation with us are they observed at present to build. This circumstance naturally suggests the query, Where did these birds construct their nests before the arrival of Europeans in this country, when there were no such places for their accommodation? I would answer probably in the same situations in which they still continue to build in the remote regions of our western forests, where European improvements of this kind are scarcely to be found, namely in the hollow of a tree, which in some cases has the nearest resemblance to their present choice of any other. One of the first settlers in the state of Kentucky informed me, that he cut down a large hollow beech tree which contained forty or fifty nests of the Chimney Swallow, most of which by the fall of the tree, or by the weather, were lying at the bottom



200 from a plate by C. H. Knobell.

1. Chimney Swallow. 2. Purple Martin. 3. Female Connecticut Warbler.

Engraved by J. H. Knobell.

of the hollow, but sufficient fragments remained adhering to the sides of the tree to enable him to number them. They appeared, he said, to be of many years standing. The present site which they have chosen must however hold out many more advantages than the former, since we see that in the whole thickly settled parts of the United States these birds have uniformly adopted this new convenience; not a single pair being observed to prefer the woods. Security from birds of prey and other animals—from storms that frequently overthrow the timber, and the numerous ready conveniences which these new situations afford are doubtless some of the advantages. The choice they have made certainly bespeaks something more than mere unreasoning instinct, and does honour to their discernment.

The nest of this bird is of singular construction, being formed of very small twigs, fastened together with a strong adhesive glue or gum, which is secreted by two glands, one on each side of the hind head, and mixes with the saliva. With this glue, which becomes hard as the twigs themselves, the whole nest is thickly besmeared. The nest itself is small and shallow, and attached by one side or edge to the wall, and is totally destitute of the soft lining with which the others are so plentifully supplied. The eggs are generally four, and white. They generally have two brood in the season. The young are fed at intervals during the greater part of the night, a fact which I have had frequent opportunities of remarking both here and in the Mississippi territory. The noise which the old ones make in passing up and down the funnel has some resemblance to distant thunder. When heavy and long continued rains occur, the nest, losing its hold, is precipitated to the bottom. This disaster frequently happens. The eggs are destroyed; but the young, tho blind, (which they are for a considerable time) sometimes scramble up along the vent, to which they cling like squirrels, the muscularity of their feet and the sharpness of their claws at this tender age being remarkable. In this situation they continue to be fed

for perhaps a week or more. Nay it is not uncommon for them voluntarily to leave the nest long before they are able to fly, and to fix themselves on the wall, where they are fed until able to hunt for themselves.

When these birds first arrive in spring, and for a considerable time after, they associate together every evening in one general rendezvous; those of a whole district roosting together. This place of repose, in the more unsettled parts of the country, is usually a large hollow tree open at top, trees of that kind, or *Swallow trees*, as they are usually called, having been noticed in various parts of the country and generally believed to be the winter quarters of these birds, where, heaps upon heaps, they dozed away the winter in a state of torpidity. Here they have been seen on their resurrection in spring, and here they have again been remarked descending to their death-like sleep in autumn.

Among various accounts of these trees that might be quoted, the following are selected as bearing the marks of authenticity. "At Middlebury, in this state," says Mr. Williams, Hist. of Vermont, p. 16, "there was a large hollow elm, called by the people in the vicinity, the Swallow tree. From a man who for several years lived within twenty rods of it, I procured this information. He always thought the Swallows tarried in the tree through the winter, and avoided cutting it down on that account. About the first of May the Swallows came out of it in large numbers, about the middle of the day, and soon returned. As the weather grew warmer they came out in the morning with a loud noise, or roar, and were soon dispersed. About half an hour before sun-down they returned in millions, circulating two or three times round the tree, and then descending like a stream into a hole about sixty feet from the ground. It was customary for persons in the vicinity to visit this tree to observe the motions of these birds: and when any persons disturbed their operations by striking violently against the tree with their axes, the Swallows would rush out in millions and with a great noise. In No-

vember, 1791, the top of this tree was blown down twenty feet below where the Swallows entered. There has been no appearance of the Swallows since. Upon cutting down the remainder an immense quantity of excrements, quills and feathers, were found, but no appearance or relics of any nests.

“Another of these Swallow trees was at Bridport. The man who lived the nearest to it gave this account. The Swallows were first observed to come out of the tree in the spring about the time that the leaves first began to appear on the trees; from that season they came out in the morning about half an hour after sun-rise. They rushed out like a stream, as big as the hole in the tree would admit, and ascended in a perpendicular line until they were above the height of the adjacent trees; then assumed a circular motion, performing their evolutions two or three times, but always in a larger circle, and then dispersed in every direction. A little before sun-down they returned in immense numbers, forming several circular motions, and then descended like a stream into the hole, from whence they came out in the morning. About the middle of September they were seen entering the tree for the last time. These birds were all of the species called the House or Chimney Swallow. The tree was a large hollow elm; the hole at which they entered was about forty feet above the ground, and about nine inches in diameter. The Swallows made their first appearance in the spring and their last appearance in the fall in the vicinity of this tree; and the neighbouring inhabitants had no doubt but that the Swallows continued in it during the winter. A few years ago a hole was cut at the bottom of the tree; from that time the Swallows have been gradually forsaking the tree and have now almost deserted it.”

Tho Mr. Williams himself, as he informs us, is led to believe from these and some other particulars which he details, “that the House Swallow in this part of America generally resides during the winter in the hollow of trees; and the Ground Swallows [Bank

Swallows] find security in the mud at the bottom of lakes, rivers, and ponds," yet I cannot in the cases just cited see any sufficient cause for such a belief. The birds were seen to pass out on the first of May or in the spring when the leaves began to appear on the trees, and about the middle of September they were seen entering the tree for the last time; but there is no information here of their being seen at any time during winter either within or around the tree. This most important part of the matter is taken for granted without the least examination, and as will be presently shewn, without foundation. I shall, I think, also prove that if these trees had been cut down in the depth of winter not a single Swallow would have been found either in a living or a torpid state! And that this was merely a place of rendezvous for *active living birds* is evident from the "immense quantity of excrements" found within it, which birds in a state of *torpidity* are not supposed to produce. The total absence of the relics of nests is a proof that it was not a breeding place, and that the whole was nothing more than one of those places to which this singular bird resorts, immediately on its arrival in May, in which also many of the males continue to roost during the whole summer, and from which they regularly depart about the middle of September. From other circumstances it appears probable that some of these trees have been for ages the summer rendezvous or general roosting place of the whole Chimney Swallows of an extensive district. Of this sort I conceive the following to be one which is thus described by a late traveller to the westward.

Speaking of the curiosities of the state of Ohio the writer observes, "In connection with this I may mention a large collection of feathers found within a hollow tree which I examined with the Rev. Mr. Story, May 18th, 1803. It is in the upper part of Waterford, about two miles distant from the Muskingum. A very large sycamore, which through age had decayed and fallen down, contained in its hollow trunk, five and a half feet in diameter, and for

nearly fifteen feet upwards, a mass of decayed feathers with a small admixture of brownish dust and the exuviae of various insects. The feathers were so rotten that it was impossible to determine to what kind of birds they belonged. They were less than those of the pigeon; and the largest of them were like the pinion and tail feathers of the Swallow. I examined carefully this astonishing collection in the hope of finding the bones and bills, but could not distinguish any. The tree with some remains of its ancient companions lying around was of a growth preceding that of the neighbouring forest. Near it and even out of its mouldering ruins grow thrifty trees of a size which indicate two or three hundred years of age.”*

Such are the usual roosting places of the Chimney Swallow in the more thinly settled parts of the country. In towns, however, they are differently situated, and it is matter of curiosity to observe that they frequently select the court-house chimney for their general place of rendezvous, as being usually more central, and less liable to interruption during the night. I might enumerate many places where this is their practice. Being in the town of Reading, Pennsylvania, in the month of August, I took notice of sixty or eighty of these birds, a little before evening, amusing themselves by ascending and descending the chimney of the court-house there. I was told that in the early part of summer they were far more numerous at that particular spot. On the twentieth of May in returning from an excursion to the Great Pine swamp, I spent part of the day in the town of Easton, where I was informed by my respected friend Mordecai Churchman, cashier of the bank there, and one of the people called Quakers, that the Chimney Swallows of Easton had selected the like situation; and that from the windows of his house, which stands nearly opposite to the court-house, I might in an hour or two witness their whole manœuvres.

* Harris's Journal, p. 180.

I accepted the invitation with pleasure. Accordingly a short time after sun-set the Chimney Swallows, which were generally dispersed about town, began to collect around the court-house, their numbers every moment increasing, till, like motes in the sunbeams, the air seemed full of them. These while they mingled amongst each other seemingly in every direction, uttering their peculiar note with great sprightliness, kept a regular circuitous sweep around the top of the court-house, and about fourteen or fifteen feet above it, revolving with great rapidity for the space of at least ten minutes. There could not be less than four or five hundred of them. They now gradually varied their line of motion until one part of its circumference passed immediately over the chimney and about five or six feet above it. Some as they passed made a slight feint of entering, which was repeated by those immediately after, and by the whole circling multitude in succession; in this feint they approached nearer and nearer at every revolution, dropping perpendicularly, but still passing over; the circle meantime becoming more and more contracted, and the rapidity of its revolution greater as the dusk of evening increased, until at length one, and then another, dropped in, another and another followed, the circle still revolving until the whole multitude had descended except one or two. These flew off as if to collect the stragglers, and in a few seconds returned with six or eight more, which, after one or two rounds, dropped in one by one, and all was silence for the night. It seemed to me hardly possible that the internal surface of the vent could accommodate them all, without clustering on one another, which I am informed they never do; and I was very desirous of observing their ascension in the morning, but having to set off before day, I had not that gratification. Mr. Churchman however, to whom I have since transmitted a few queries, has been so obliging as to inform me, that towards the beginning of June the number of those that regularly retired to the court-house to roost, was not more than one-fourth of the former; that on the morning of the twenty-third

of June he particularly observed their reascension, which took place at a quarter past four, or twenty minutes before sun-rise, and that they passed out in less than three minutes. That at my request the chimney had been examined from above; but that as far down at least as nine feet, it contained no nests; tho at a former period it is certain that their nests were very numerous there, so that the chimney was almost choked, and a sweep could with difficulty get up it. But then it was observed that their place of nocturnal retirement was in another quarter of the town. "On the whole," continues Mr. Churchman, "I am of opinion, that those who continue to roost at the court-house are male birds, or such as are not engaged in the business of incubation, as that operation is going on in almost every unoccupied chimney in town. It is reasonable to suppose if they made use of that at the court-house for this purpose, at least some of their nests would appear towards the top, as we find such is the case where but few nests are in a place."

In a subsequent letter Mr. Churchman writes as follows:—
"After the young brood produced in the different chimneys in Easton had taken wing, and a week or ten days previous to their total disappearance, they entirely forsook the court house chimney, and rendezvoused in accumulated numbers in the southernmost chimney of John Ross's mansion, situated perhaps one hundred feet northeastward of the court house. In this last retreat I several times counted more than two hundred go in of an evening, when I could not perceive a single bird enter the court-house chimney. I was much diverted one evening on seeing a cat, which came upon the roof of the house, and placed herself near the chimney, where she strove to arrest the birds as they entered, without success; she at length ascended to the chimney top and took her station, and the birds descended in gyrations without seeming to regard grimal-kin, who made frequent attempts to grab them. I was pleased to see that they all escaped her fangs. About the first week in the ninth month [September] the birds quite disappeared; since which

I have not observed a single individual. Though I was not so fortunate as to be present at their general assembly and council when they concluded to take their departure, nor did I see them commence their flight; yet I am fully persuaded that none of them remain in any of our chimneys here. I have had access to Ross's chimney where they last resorted, and could see the lights out from bottom to top, without the least vestige or appearance of any birds. Mary Ross also informed me, that they have had their chimneys swept previous to their making fires, and though late in autumn no birds have been found there. Chimneys also which have not been used have been ascended by sweeps in the winter without discovering any. Indeed all of them are swept every fall and winter, and I have never heard of the Swallows being found in either a dead, living or torpid state. As to the court-house it has been occupied as a place of worship two or three times a week for several weeks past, and at those times there has been fire in the stoves, the pipes of them both going into the chimney, which is shut up at bottom by brick work: and as the birds had forsaken that place, it remains pretty certain that they did not return there; and if they did the smoke I think would be deleterious to their existence; especially as I never knew them to resort to kitchen chimneys where fire was kept in the summer. I think I have noticed them enter such chimneys for the purpose of exploring; but I have also noticed that they immediately ascended, and went off, on finding fire and smoke."

The Chimney Swallow is easily distinguished in air from the rest of its tribe here, by its long wings, its short body, the quick and slight vibrations of its wings, and its wide, unexpected diving rapidity of flight; shooting swiftly in various directions without any apparent motion of the wings, and uttering the sounds *tsip tsip tsip tsee tsee* in a hurried manner. In roosting, the thorny extremities of its tail are thrown in for its support. It is never seen to alight but in hollow trees or chimneys; is always most gay and active in wet and gloomy weather, and is the earliest abroad in morning, and

latest out in evening of all our Swallows. About the first or second week in September, they move off to the south, being often observed on their route accompanied by the Purple Martins.

When we compare the manners of these birds while here with the account given by capt. Henderson of those that winter in such multitudes at Honduras, it is impossible not to be struck with the resemblance; or to suppress our strong suspicions that they may probably be the very same.

This species is four inches and a half in length, and twelve inches in extent! altogether of a deep sooty brown, except the chin and line over the eye, which are of a dull white; the lores, as in all the rest, are black; bill extremely short, hard and black, nostrils placed in a slightly elevated membrane; legs covered with a loose purplish skin; thighs naked and of the same tint; feet extremely muscular; the three fore toes nearly of a length; claws very sharp; the wing when closed extends an inch and a half beyond the tip of the tail, which is rounded, and consists of *ten* feathers scarcely longer than their coverts; their shafts extend beyond the vanes, are sharp pointed, strong, and very elastic, and of a deep black color; the shafts of the wing quills are also remarkably strong; eye black, surrounded by a bare blackish skin or orbit.

The female can scarcely be distinguished from the male by her plumage.

PURPLE MARTIN.

HIRUNDO PURPUREA.

[Plate XXXIX.—Fig. 1, *Male*.—Fig. 2, *Female*.]

LATH. *Syn.* IV, p. 574. 21. *Ibid.* IV, p. 575. 23.—CATESB. *Car.* I, 51.—*Arct. Zool.* II, No. 333.—*Hirondeile bleue de la Caroline*, BUFF. VI, p. 674. *Pl. enl.* 722.—*Le Martinet couleur de poupre*, BUFF. VI, p. 676.—TURT. *Syst.* 629.—EDW. 120.—*Hirundo subis*, LATH. IV, p. 575—24.—PEALE'S *Museum*, No. 7645, 7646.

THIS well known bird is a general inhabitant of the United States, and a particular favorite wherever he takes up his abode. I never met with more than one man who disliked the Martins and would not permit them to settle about his house. This was a penurious close-fisted German, who hated them because as he said “they eat his *peas*.” I told him he must certainly be mistaken, as I never knew an instance of Martins eating *peas*; but he replied with coolness that he had many times seen them himself “blaying near the hife, and going *schnip, schnap*,” by which I understood that it was his *bees* that had been the sufferers; and the charge could not be denied.

This sociable and half domesticated bird arrives in the southern frontiers of the United States late in February or early in March; reaches Pennsylvania about the first of April, and extends his migrations as far north as the country round Hudson's Bay, where he is first seen in May, and disappears in August; so, according to the doctrine of torpidity, has consequently a pretty long annual nap in those frozen regions, of eight or nine months, under the ice! We, however, choose to consider him as advancing north-erly with the gradual approach of spring, and retiring with his

young family, on the first decline of summer, to a more congenial climate.

The summer residence of this agreeable bird is universally among the habitations of man; who, having no interest in his destruction, and deriving considerable advantage as well as amusement from his company, is generally his friend and protector. Wherever he comes, he finds some hospitable retreat fitted up for his accommodation and that of his young, either in the projecting wooden cornice—on the top of the roof, or sign post—in the box appropriated to the Blue-bird; or, if all these be wanting, in the dove-house among the pigeons. In this last case, he sometimes takes possession of one quarter or tier of the premises, in which not a pigeon dare for a moment set its foot. Some people have large conveniences formed for the Martins, with many apartments, which are usually fully tenanted, and occupied regularly every spring; and in such places, particular individuals have been noted to return to the same box for several successive years. Even the solitary Indian seems to have a particular respect for this bird. The Chactaws and Chickasaws cut off all the top branches from a sapling near their cabins, leaving the prongs a foot or two in length, on each of which they hang a gourd, or calabash, properly hollowed out for their convenience. On the banks of the Mississippi the negroes stick up long canes, with the same species of apartment fixed to their tops, in which the Martins regularly breed. Wherever I have travelled in this country I have seen with pleasure the hospitality of the inhabitants to this favorite bird.

As superseding the necessity of many of my own observations on this species, I beg leave to introduce in this place an extract of a letter from the late learned and venerable John Joseph Henry, esq. judge of the supreme court of Pennsylvania, a man of most amiable manners, which was written to me but a few months before his death, and with which I am happy to honor my performance.—“The history of the Purple Martin of America,” says he,

“ which is indigenous in Pennsylvania and countries very far north of our latitude, will, under your control, become extremely interesting. We know its manners, habitudes, and useful qualities here; but we are not generally acquainted with some traits in its character, which in my mind rank it in the class of the most remarkable birds of passage. Somewhere (I cannot now refer to book and page) in Anson’s Voyage, or in Dampier, or some other southern voyager, I recollect that the Martin is named as an inhabitant of the regions of southern America, particularly of Chili; and in consequence from the knowledge we have of its immense emigration northward in our own country, we may fairly presume that its flight extends to the south as far as Terra del Fuego. If the conjecture be well founded, we may with some certainty place this useful and delightful companion and friend of the human race as the first in the order of birds of passage. Nature has furnished it with a lengthy, strong, and nervous pinion; its legs are short too, as not to impede its passage; the head and body are flattish; in short, it has every indication from bodily formation that Providence intended it as a bird of the longest flight. Belknap speaks of it as a visitant of New Hampshire. I have seen it in great numbers at Quebec. Hearne speaks of it in lat. 60° North. To ascertain the times of the coming of the Martin to New Orleans; and its migration to and from Mexico, Quito and Chili, are desirable data in the history of this bird; but it is probable that the state of science in those countries render this wish hopeless.

“ Relative to the domestic history, if it may be so called, of the Blue-bird (of which you have given so correct and charming a description) and the Martin, permit me to give you an anecdote. In 1800 I removed from Lancaster to a farm a few miles above Harrisburgh. Knowing the benefit derivable to a farmer from the neighbourhood of the Martin in preventing the depredations of the Bald Eagle, the Hawks and even the Crows, my carpenter was employed to form a large box with a number of apartments for the

Martin. The box was put up in the autumn. Near and around the house were a number of well grown apple trees and much shrubbery, a very fit haunt for the feathered race. About the middle of February the Blue-birds came; in a short time they were very familiar, and took possession of the box: these consisted of two or three pairs. By the fifteenth of May the Blue-birds had eggs, if not young. Now the Martins arrived in numbers, visited the box, and a severe conflict ensued. The Blue-birds seemingly animated by their right of possession, or for the protection of their young, were victorious. The Martins regularly arrived about the middle of May for the eight following years, examined the apartments of the box in the absence of the Blue-birds, but were uniformly compelled to fly upon the return of the latter.

“The trouble caused you by reading this note you will be pleased to charge to the Martin. A box replete with that beautiful traveller, is not very distant from my bed head. Their notes seem discordant because of their numbers; yet to me they are pleasing. The industrious farmer and mechanic would do well to have a box fixed near the apartments of their drowsy labourers. Just as the dawn approaches, the Martin begins its notes, which last half a minute or more; and then subside until the twilight is fairly broken. An animated and incessant musical chattering now ensues, sufficient to arouse the most sleepy person. Perhaps chantecler is not their superior in this beneficial qualification; and he is far beneath the Martin in his powers of annoying birds of prey.”

I shall add a few particulars to this faithful and interesting sketch by my deceased friend. About the middle or twentieth of April the Martins first begin to prepare their nest. The last of these which I examined was formed of dry leaves of the weeping willow, slender straws, hay and feathers, in considerable quantity. The eggs were four, very small for the size of the bird, and pure white without any spots. The first brood appears in May, the second late in July. During the period in which the female is lay-

ing, and before she commences incubation, they are both from home the greater part of the day. When the female is sitting she is frequently visited by the male, who also occupies her place while she takes a short recreation abroad. He also often passes a quarter of an hour in the apartment beside her, and has become quite domesticated since her confinement. He sits on the outside dressing and arranging his plumage, occasionally passing to the door of the apartment as if to enquire how she does. His notes at this time seem to have assumed a peculiar softness, and his gratulations are expressive of much tenderness. Conjugal fidelity, even where there is a number together, seems to be faithfully preserved by these birds. On the twenty-fifth of May a male and female Martin took possession of a box in Mr. Bartram's garden. A day or two after, a second female made her appearance, and staid for several days; but from the cold reception she met with, being frequently beat off by the male, she finally abandoned the place, and set off, no doubt to seek for a more sociable companion.

The Purple Martin, like his half-cousin the King-bird, is the terror of Crows, Hawks, and Eagles. These he attacks whenever they make their appearance, and with such vigor and rapidity, that they instantly have recourse to flight. So well known is this to the lesser birds and to the domestic poultry, that as soon as they hear the Martin's voice, engaged in fight, all is alarm and consternation. To observe with what spirit and audacity this bird dives and sweeps upon and around the Hawk or the Eagle is astonishing. He also bestows an occasional bastinading on the King-bird when he finds him too near his premises; tho he will at any time instantly co-operate with him in attacking the common enemy.

The Martin differs from all the rest of our Swallows in the particular prey which he selects. Wasps, bees, large beetles, particularly those called by the boys *goldsmiths*, seem his favorite game. I have taken four of these large beetles from the stomach of a Purple Martin, each of which seemed entire and even unbruised.

The flight of the Purple Martin unites in it all the swiftness, ease, rapidity of turning and gracefulness of motion of its tribe. Like the Swift of Europe, he sails much with little action of the wings. He passes through the most crowded parts of our streets, eluding the passengers with the quickness of thought; or plays among the clouds, gliding about at a vast height, like an aerial being. His usual note *peuo peuo peuo*, is loud and musical; but is frequently succeeded by others more low and guttural. Soon after the twentieth of August he leaves Pennsylvania for the south.

This bird has been described three or four different times by European writers, as so many different species. The Canadian Swallow of Turton, and the Great American Martin of Edwards, being evidently the female of the present species. The Violet Swallow of the former author, said to inhabit Louisiana, differs in no respect from the present. Deceived by the appearance of the flight of this bird, and its similarity to that of the Swift of Europe, strangers from that country have also asserted that the Swift is common to North America and the United States. No such bird, however, inhabits any part of this continent that I have as yet visited.

The Purple Martin is eight inches in length, and sixteen inches in extent; except the lores which are black, and the wings and tail, which are of a brownish black, he is of a rich and deep purplish blue, with strong violet reflections; the bill is strong, the gap very large; the legs also short, stout, and of a dark dirty purple; the tail consists of twelve feathers, is considerably forked and edged with purple blue; the eye full and dark.

The female (fig. 2.) measures nearly as large as the male; the upper parts are blackish brown, with blue and violet reflections thinly scattered; chin and breast greyish brown; sides under the wings darker; belly and vent whitish, not pure, with stains of dusky and yellow ochre; wings and tail blackish brown.

CONNECTICUT WARBLER.

SYLVIA AGILIS.

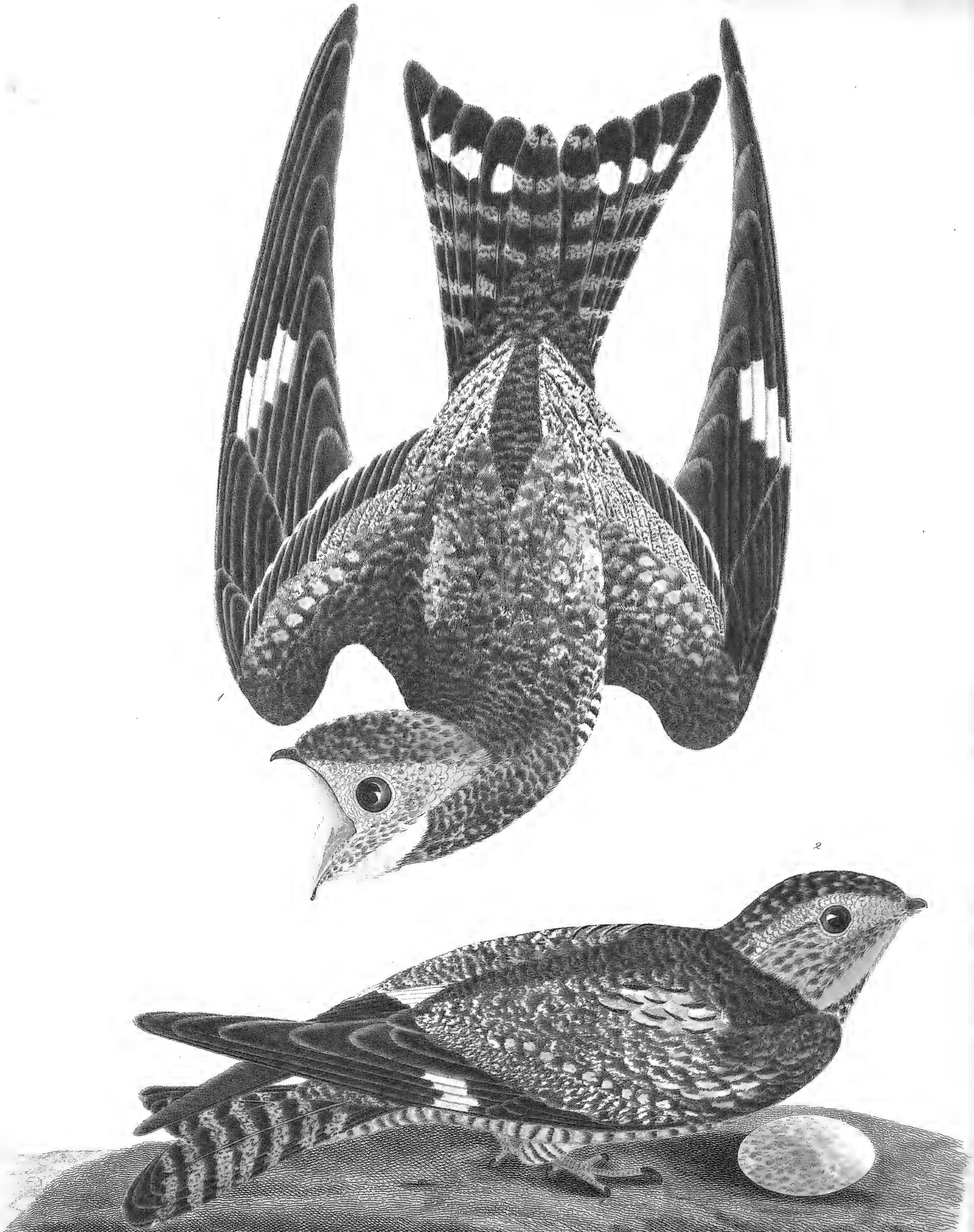
[Plate XXXIX.—Fig. 4.]

THIS is a new species, first discovered in the state of Connecticut, and twice since met with in the neighbourhood of Philadelphia. As to its notes or nest, I am altogether unacquainted with them. The different specimens I have shot corresponded very nearly in their markings; two of these were males, and the other undetermined, but conjectured also to be a male. It was found in every case among low thickets, but seemed more than commonly active, not remaining for a moment in the same position. In some of my future rambles I may learn more of this solitary species.

Length five inches and three quarters, extent eight inches; whole upper parts a rich yellow olive; wings dusky brown, edged with olive; throat dirty white, or pale ash; upper part of the breast dull greenish yellow; rest of the lower parts a pure rich yellow; legs long, slender, and of a pale flesh color; round the eye a narrow ring of yellowish white; upper mandible pale brown, lower whitish; eye dark hazel.

Since writing the above I have shot two specimens of a bird which in every particular agrees with the above, except in having the throat of a dull buff color instead of pale ash; both of these were females, and I have little doubt but they are of the same species with the present, as their peculiar activity seemed exactly similar to the males above described.

These birds do not breed in the lower parts of Pennsylvania, tho they probably may be found in summer in the alpine swamps and northern regions, in company with a numerous class of the same tribe that breed in these unfrequented solitudes.



Drawn from nature by A. Wilson.

Engraved by J. G. Warnicke.

1. Night-Hawk? 2. Female?

NIGHT-HAWK.

CAPRIMULGUS AMERICANUS.[Plate XL.—Fig. 1, *Male*.—Fig. 2, *Female*.]

Long-winged Goatsucker, Arct. Zool. No. 337.—PEALE's Museum, No. 7723, male, 7724, female.

THIS bird, in Virginia and some of the southern districts, is called a bat; the name Night-hawk is usually given it in the middle and northern states, probably on account of its appearance when on wing very much resembling some of our small Hawks, and from its habit of flying chiefly in the evening. Tho it is a bird universally known in the United States, and inhabits North America, in summer, from Florida to Hudson's Bay, yet its history has been involved in considerable obscurity by foreign writers, as well as by some of our own country. Of this I shall endeavour to divest it in the present account.

Three species only, of this genus, are found within the United States; the *Chuck-will's-widow*, the *Whip-poor-will*, and the *Night-hawk*. The first of these is confined to those states lying south of Maryland; the other two are found generally over the union, but are frequently confounded one with the other, and by some supposed to be one and the same bird. A comparison of this with the succeeding plate, which contains the figure of the *Whip-poor-will*, will satisfy those who still have their doubts on this subject; and the great difference of manners which distinguishes each will render this still more striking and satisfactory.

On the last week in April, the Night-Hawk commonly makes its first appearance in this part of Pennsylvania. At what particular period they enter Georgia I am unable to say; but I find by

my notes, that in passing to New Orleans by land, I first observed this bird in Kentucky on the twenty-first of April. They soon after disperse generally over the country, from the sea shore to the mountains, even to the heights of the Alleghany; and are seen, towards evening, in pairs, playing about, high in air, pursuing their prey, wasps, flies, beetles, and various other winged insects of the larger sort. About the middle of May the female begins to lay. No previous preparation or construction of nest is made; though doubtless the particular spot has been reconnoitred and determined on. This is sometimes in an open space in the woods, frequently in a ploughed field, or in the corner of a corn-field. The eggs are placed on the bare ground; in all cases on a dry situation, where the color of the leaves, ground, stones or other circumjacent parts of the surface may resemble the general tint of the eggs, and thereby render them less easy to be discovered. The eggs are most commonly two, rather oblong, equally thick at both ends, of a dirty bluish white, and marked with innumerable touches of dark olive brown. To the immediate neighbourhood of this spot the male and female confine themselves, roosting on the high trees adjoining, during the greater part of the day, seldom however together, and almost always on separate trees. They also sit lengthwise on the branch, fence or limb on which they roost, and never across, like most other birds; this seems occasioned by the shortness and slender form of their legs and feet, which are not at all calculated to grasp the branch with sufficient firmness to balance their bodies.

As soon as incubation commences, the male keeps a most vigilant watch around. He is then more frequently seen playing about in the air over the place, even during the day, mounting by several quick vibrations of the wings, then a few slower, uttering all the while a sharp harsh squeak, till having gained the highest point, he suddenly precipitates himself, head foremost, and with great rapidity, down sixty or eighty feet, wheeling up again as sud-

denly; at which instant is heard a loud booming sound, very much resembling that produced by blowing strongly into the bung hole of an empty hogshead; and which is doubtless produced by the sudden expansion of his capacious mouth, while he passes through the air, as exhibited in the figure on the plate. He again mounts by alternate quick and leisurely motions of the wings, playing about as he ascends, uttering his usual hoarse squeak, till in a few minutes he again dives with the same impetuosity and violent sound as before. Some are of opinion that this is done to intimidate man or beast from approaching his nest, and he is particularly observed to repeat these divings most frequently around those who come near the spot, sweeping down past them, sometimes so near, and so suddenly, as to startle and alarm them. The same individual is, however, often seen performing these manœuvres over the river, the hill, the meadow and the marsh in the space of a quarter of an hour, and also towards the Fall, when he has no nest. This singular habit belongs peculiarly to the male. The female has, indeed, the common hoarse note, and much the same mode of flight; but never precipitates herself in the manner of the male. During the time she is sitting, she will suffer you to approach within a foot or two before she attempts to stir, and when she does, it is in such a fluttering, tumbling manner, and with such appearance of a lame and wounded bird, as nine times in ten to deceive the person, and induce him to pursue her. This "pious fraud," as the poet Thompson calls it, is kept up until the person is sufficiently removed from the nest, when she immediately mounts and disappears. When the young are first hatched it is difficult to distinguish them from the surface of the ground, their down being of a pale brownish color, and they are altogether destitute of the common shape of birds, sitting so fixed and so squat as to be easily mistaken for a slight prominent mouldiness lying on the ground. I cannot say whether they have two brood in the season; I rather conjecture that they have generally but one.

The Night-hawk is a bird of strong and vigorous flight, and of large volume of wing. It often visits the city, darting and squeaking over the streets at a great height, diving perpendicularly with the same hollow sound as before described. I have also seen them sitting on chimney tops in some of the most busy parts of the city, occasionally uttering their common note.

When the weather happens to be wet and gloomy, the Night-hawks are seen abroad at all times of the day, generally at a considerable height; their favorite time, however, is from two hours before sun-set until dusk. At such times they seem all vivacity, darting about in the air in every direction, making frequent short sudden turnings, as if busily engaged in catching insects. Even in the hottest, clearest weather, they are occasionally seen abroad, squeaking at short intervals. They are also often found sitting along the fences, basking themselves in the sun. Near the sea-shore, in the vicinity of extensive salt marshes, they are likewise very numerous, skimming over the meadows, in the manner of Swallows, until it is so dark that the eye can no longer follow them.

When wounded and taken, they attempt to intimidate you by opening their mouth to its utmost stretch, throwing the head forwards, and uttering a kind of guttural whizzing sound, striking also violently with their wings, which seem to be their only offensive weapons; for they never attempt to strike with the bill or claws.

About the middle of August they begin to move off towards the south; at which season they may be seen almost every evening, from five o'clock until after sun-set, passing along the Schuylkill and the adjacent shores, in widely scattered multitudes, all steering towards the south. I have counted several hundreds within sight at the same time, dispersed through the air, and darting after insects as they advanced. These occasional processions continue for two or three weeks; none are seen travelling in the opposite

direction. Sometimes they are accompanied by at least twice as many Barn Swallows, some Chimney Swallows and Purple Martins. They are also most numerous immediately preceding a north-east storm. At this time also they abound in the extensive meadows on the Schuylkill and Delaware, where I have counted fifteen skimming over a single field in an evening. On shooting some of these, on the fourteenth of August, their stomachs were almost exclusively filled with crickets. From one of them I took nearly a common snuff-box full of these insects, all seemingly fresh swallowed.

By the middle or twentieth of September very few of these birds are to be seen in Pennsylvania; how far south they go, or at what particular time they pass the southern boundaries of the United States I am unable to say. None of them winter in Georgia.

The ridiculous name *Goatsucker*, which was first bestowed on the European species from a foolish notion that it sucked the teats of the goats, because probably it inhabited the solitary heights where they fed, which nickname has been since applied to the whole genus, I have thought proper to omit. There is something worse than absurd in continuing to brand a whole family of birds with a knavish name, after they are universally known to be innocent of the charge. It is not only unjust, but tends to encourage the belief in an idle fable that is totally destitute of all foundation.

The Night-Hawk is nine inches and a half in length, and twenty-three inches in extent; the upper parts are of a very deep blackish brown, unmixed on the primaries, but thickly sprinkled or powdered on the back scapulars and head with innumerable minute spots and streaks of a pale cream color, interspersed with specks of reddish; the scapulars are barred with the same, also the tail coverts and tail, the inner edges of which are barred with white and deep brownish black for an inch and a half from the tip, where they are crossed broadly with a band of white, the two middle ones excepted, which are plain deep brown, barred and

sprinkled with light clay; a spot of pure white extends over the five first primaries, the outer edge of the exterior feather excepted, and about the middle of the wing; a triangular spot of white also marks the throat, bending up on each side of the neck; the bill is exceeding small, scarcely one eighth of an inch in length, and of a black color; the nostrils circular, and surrounded with a prominent rim; eye large and full, of a deep bluish black; the legs are short, feathered a little below the knees, and, as well as the toes, of a purplish flesh color, seamed with white; the middle claw is pectinated on its inner edge, to serve as a comb to clear the bird of vermin; the whole lower parts of the body are marked with transverse lines of dusky and yellowish. The tail is somewhat *shorter* than the wings when shut, is handsomely forked, and consists of ten broad feathers; the mouth is extremely large, and of a reddish flesh color within; *there are no bristles about the bill*; the tongue is very small, and attached to the inner surface of the mouth.

The female measures about nine inches in length and twenty-two in breadth; differs in having no white band on the tail, but has the spot of white on the wing; wants the triangular spot of white on the throat, instead of which there is a dully defined mark of a reddish cream color; the wings are nearly black, all the quills being slightly tipped with white; the tail is as in the male, and minutely tipped with white; all the scapulars and whole upper parts are powdered with a much lighter grey.

There is no description of the present species in Turton's translation of Linnæus. The characters of the genus given in the same work are also in this case incorrect, viz. "*mouth furnished with a series of bristles—tail not forked*," the Night-hawk having nothing of the former, and its tail being largely forked.



2. *Scatella* (G. G. Wilson)

1. *Whip-poor-will* 2. female

WHIP-POOR-WILL.

CAPRIMULGUS VOCIFERUS.

[Plate XLI.—Fig. 1, *Male*.—Fig. 2, *Female*.—Fig. 3, *Young*.]

PEALE's Museum, No. 7721, male, 7722, female.

THIS is a singular and very celebrated species, universally noted over the greater part of the United States for the loud reiterations of his favorite call in spring; and yet personally he is but little known, most people being unable to distinguish this from the preceding species, when both are placed before them; and some insisting that they are the same. This being the case, it becomes the duty of his historian to give a full and faithful delineation of his character and peculiarity of manners, that his existence as a distinct and independent species may no longer be doubted, nor his story mingled confusedly with that of another. I trust that those best acquainted with him will bear witness to the fidelity of the portrait.

On or about the twenty-fifth of April, if the season be not uncommonly cold, the Whip-poor-will is first heard in this part of Pennsylvania, in the evening, as the dusk of twilight commences, or in the morning as soon as dawn has broke. In the state of Kentucky I first heard this bird on the fourteenth of April, near the town of Danville. The notes of this solitary bird, from the ideas which are naturally associated with them, seem like the voice of an old friend, and are listened to by almost all with great interest. At first they issue from some retired part of the woods, the glen or mountain; in a few evenings perhaps we hear them from the adjoining coppice—the garden fence—the road before the door, and even from the roof of the dwelling house, long after the family

have retired to rest. Some of the more ignorant and superstitious consider this near approach as foreboding no good to the family, nothing less than sickness, misfortune or death to some of its members; these visits, however, so often occur without any bad consequences, that this superstitious dread seems on the decline.

He is now a regular acquaintance. Every morning and evening his shrill and rapid repetitions are heard from the adjoining woods, and when two or more are calling out at the same time, as is often the case in the pairing season, and at no great distance from each other, the noise, mingling with the echoes from the mountains, is really surprising. Strangers, in parts of the country where these birds are numerous, find it almost impossible for some time to sleep; while to those long acquainted with them, the sound often serves as a lullaby to assist their repose.

These notes seem pretty plainly to articulate the words which have been generally applied to them, *Whip-poor-will*, the first and last syllables being uttered with great emphasis, and the whole in about a second to each repetition; but when two or more males meet, their whip-poor-will altercations become much more rapid and incessant, as if each were straining to overpower or silence the other. When near, you often hear an introductory *cluck* between the notes. At these times, as well as at almost all others, they fly low, not more than a few feet from the surface, skimming about the house and before the door, alighting on the wood pile, or settling on the roof. Towards midnight they generally become silent, unless in clear moonlight, when they are heard with little intermission till morning. If there be a creek near, with high precipitous bushy banks, they are sure to be found in such situations. During the day they sit in the most retired, solitary and deep shaded parts of the woods, generally on high ground, where they repose in silence. When disturbed they rise within a few feet, sail low and slowly through the woods for thirty or forty yards, and generally settle on a low branch or on the ground. Their sight appears de-

ficient during the day, as, like Owls, they seem then to want that vivacity for which they are distinguished in the morning and evening twilight. They are rarely shot at, or molested; and from being thus transiently seen in the obscurity of dusk, or in the deep umbrage of the woods, no wonder their particular markings of plumage should be so little known, or that they should be confounded with the Night-hawk, whom in general appearance they so much resemble. The female begins to lay about the second week in May, selecting for this purpose the most unfrequented part of the wood, often where some brush, old logs, heaps of leaves, &c. had been lying, and always on a dry situation. The eggs are deposited on the ground, or on the leaves, not the slightest appearance of a nest being visible. These are usually two in number, in shape much resembling those of the Night-hawk, but having the ground color much darker, and more thickly marbled with dark olive. The precise period of incubation I am unable to say.

In traversing the woods one day, in the early part of June, along the brow of a rocky declivity, a *Whip-poor-will* rose from my feet and fluttered along, sometimes prostrating herself and beating the ground with her wings, as if just expiring. Aware of her purpose, I stood still and began to examine the space immediately around me for the eggs or young, one or other of which I was certain must be near. After a long search to my mortification I could find neither; and was just going to abandon the spot, when I perceived somewhat like a slight mouldiness among the withered leaves, and on stooping down discovered it to be a young *Whip-poor-will*, seemingly asleep, as its eye-lids were nearly closed; or perhaps this might only be to protect its tender eyes from the glare of day. I sat down by it on the leaves, and drew it as it then appeared (see fig. 3.). It was probably not a week old. All the while I was thus engaged it neither moved its body, nor opened its eyes more than half; and I left it as I found it. After I had walked about a quarter of a mile from the spot, recollecting that I had left

a pencil behind, I returned and found my pencil, but the young bird was gone.

Early in June, as soon as the young appear, the notes of the male usually cease, or are heard but rarely. Towards the latter part of summer, a short time before these birds leave us, they are again occasionally heard; but their call is then not so loud—much less emphatical, and more interrupted than in spring. Early in September they move off towards the south.

The favorite places of resort for these birds are on high dry situations; in low marshy tracts of country they are seldom heard. It is probably on this account that they are scarce on the sea coast and its immediate neighbourhood; while towards the mountains they are very numerous. The Night-Hawks, on the contrary, delight in these extensive sea marshes; and are much more numerous there than in the interior and higher parts of the country. But nowhere in the United States have I found the Whip-poor-will in such numbers as in that tract of country in the state of Kentucky called the Barrens. This appears to be their most congenial climate and place of residence. There, from the middle of April to the first of June, as soon as the evening twilight draws on, the shrill and confused clamours of these birds are incessant, and very surprising to a stranger. They soon, however, become extremely agreeable, the inhabitants lie down at night lulled by their whistlings; and the first approaches of dawn is announced by a general and lively chorus of the same music; while the full-toned *tooting* as it is called of the Pinnated Grous, forms a very pleasing bass to the whole.

I shall not, in the manner of some, attempt to amuse the reader with a repetition of the unintelligible names given to this bird by the Indians; or the superstitious notions generally entertained of it by the same people. These seem as various as the tribes, or even families with which you converse; scarcely two of them will tell you the same story. It is easy however to observe, that this, like the Owl and other nocturnal birds, is held by them in a kind

of suspicious awe, as a bird with which they wish to have as little to do as possible. The superstition of the Indian differs very little from that of an illiterate German, a Scots Highlander, or the less informed of any other nation. It suggests ten thousand fantastic notions to each, and these, instead of being recorded with all the punctilio of the most important truths, seem only fit to be forgotten. Whatever, among either of these people, is strange and not comprehended, is usually attributed to supernatural agency; and an unexpected sight, or uncommon incident, is often ominous of good, but more generally of bad fortune, to the parties. Night, to minds of this complexion, brings with it its kindred horrors, its apparitions, strange sounds and awful sights; and this solitary and inoffensive bird being a frequent wanderer in these hours of ghosts and hobgoblins, is considered by the Indians as being by habit and repute little better than one of them. All those people, however, are not so credulous: I have conversed with Indians who treated these silly notions with contempt.

The Whip-poor-will is never seen during the day, unless in circumstances such as have been described. Their food appears to be large moths, grasshoppers, pismires, and such insects as frequent the bark of old rotten and decaying timber. They are also expert in darting after winged insects. They will sometimes skim in the dusk, within a few feet of a person, uttering a kind of low chatter as they pass. In their migrations north, and on their return, they probably stop a day or two at some of their former stages, and do not advance in one continued flight. The Whip-poor-will was first heard this season on the second day of May in a corner of Mr. Bartram's woods, not far from the house, and for two or three mornings after in the same place, where I also saw it. From this time until the beginning of September there were none of these birds to be found, within at least one mile of the place; tho I frequently made search for them. On the fourth of September the Whip-poor-will was again heard for two evenings,

successively, in the same part of the woods. I also heard several of them passing, within the same week, between dusk and nine o'clock at night, it being then clear moonlight. These repeated their notes three or four times, and were heard no more. It is highly probable that they migrate during the evening and night.

The Whip-poor-will is nine inches and a half long, and nineteen inches in extent; the bill is blackish, a full quarter of an inch long, much stronger than that of the Night-hawk, and bent a little at the point, the under mandible arched a little upwards, following the curvature of the upper; the nostrils are prominent and tubular, their openings directed forward; the mouth is extravagantly large, of a pale flesh color within, and beset along the sides with a number of long thick elastic bristles, the longest of which extends more than half an inch beyond the point of the bill, end in fine hair, and curve inwards; these seem to serve as feelers; and prevent the escape of winged insects: the eyes are very large, full, and bluish black; the plumage above is so variegated with black, pale cream, brown, and rust color, sprinkled and powdered in such minute streaks and spots, as to defy description; the upper part of the head is of a light brownish grey, marked with a longitudinal streak of black, with others radiating from it; the back is darker, finely streaked with a less deep black; the scapulars are very light whitish ochre, beautifully variegated with two or three oblique streaks of very deep black; the tail is rounded, consisting of ten feathers, the exterior one an inch and a quarter shorter than the middle ones, the three outer feathers on each side are blackish brown for half their length, thence pure white to the tips, the exterior one is edged with deep brown nearly to the tip; the deep brown of these feathers is regularly studded with light brown spots; the four middle ones are without the white at the ends, but beautifully marked with herring-bone figures of black and light ochre finely powdered; cheeks and sides of the head of a brown orange or burnt color; the wings, when shut, reach scarcely to the middle of the tail, and are elegantly

spotted with very light and dark brown, but are entirely without the large spot of white which distinguishes those of the Night-hawk; chin black, streaked with brown; a narrow semicircle of white passes across the throat; breast and belly irregularly mottled and streaked with black and yellow ochre; the legs and feet are of a light purplish flesh color, seamed with white; the former feathered before, nearly to the feet; the two exterior toes are joined to the middle one as far as the first joint by a broad membrane; the inner edge of the middle claw is pectinated, and from the circumstance of its being frequently found with small portions of down adhering to the teeth, is probably employed as a comb to rid the plumage of its head of vermin, this being the principal and almost only part so infested in all birds.

The female is about an inch less in length and in extent; the bill, mustaches, nostrils, &c. as in the male. She differs in being much lighter on the upper parts, seeming as if powdered with grains of meal; and instead of the white on the three lateral tail feathers, has them tipped for about three quarters of an inch with a cream color; the bar across the throat is also of a brownish ochre; the cheeks and region of the eyes are brighter brownish orange, which passes also to the neck, and is sprinkled with black and specks of white; the streak over the eye is also lighter.

The young was altogether covered with fine down of a pale brown color; the shafts or rather sheaths of the quills bluish; the point of the bill just perceptible.

Twenty species of this singular genus are now known to naturalists; of these one only belongs to Europe, one to Africa, one to New Holland, two to India, and fifteen to America.

The present species, tho' it approaches nearer in its plumage to that of Europe than any other of the tribe, differs from it in being entirely without the large spot of white on the wing; and in being considerably less. Its voice, and particular call, are also entirely different.

Farther to illustrate the history of this bird, the following notes are added, made at the time of dissection. Body, when stript of the skin, less than that of the Wood Thrush; breast bone one inch in length; second stomach strongly muscular, filled with fragments of pismires and grasshoppers; skin of the bird loose, wrinkly and scarcely attached to the flesh; flesh also loose, extremely tender; bones thin and slender; sinews and muscles of the wing feeble; distance between the tips of both mandibles, when expanded, full two inches, length of the opening one inch and a half, breadth one inch and a quarter; tongue very short, attached to the skin of the mouth, its internal part or *os hyoides* pass up the hind head, and reach to the front, like those of the Woodpecker; which enables the bird to revert the lower part of the mouth in the act of seizing insects and in calling; skull extremely light and thin, being semi-transparent, its cavity nearly half occupied by the eyes; aperture for the brain very small, the quantity not exceeding that of a Sparrow; an Owl of the same extent of wing has at least ten times as much.

Tho this noted bird has been so frequently mentioned by name, and its manners taken notice of by almost every naturalist who has written on our birds, yet *personally* it has never yet been described by any writer with whose works I am acquainted. Extraordinary as this may seem, it is nevertheless true; and in proof I offer the following facts.

Three species only of this genus are found within the United States, the *Chuck-will's-widow*, the *Night-hawk*, and the *Whip-poor-will*. Catesby, in the eighth plate of his Natural History of Carolina, has figured the first, and in the sixteenth of his Appendix the second; to this he has added particulars of the Whip-poor-will, believing it to be that bird, and has ornamented his figure of the *Night-hawk* with a large bearded appendage, of which in nature it is entirely destitute. After him Mr. Edwards, in his sixty-third plate, has in like manner figured the *Night-hawk*, also adding the

bristles, and calling his figure the *Whip-poor-will*, accompanying it with particulars of the notes, &c. of that bird, chiefly copied from Catesby. The next writer of eminence who has spoken of the Whip-poor-will is Mr. Pennant, justly considered as one of the most judicious and discriminating of English naturalists; but, deceived by "the lights he had," he has in his account of the Short-winged Goatsucker,* (Arct. Zool. p. 434.) given the size, markings of plumage, &c. of the *Chuck-will's-widow*; and in the succeeding account of his Long-winged Goatsucker, describes pretty accurately the Night-hawk. Both of these birds he considers to be the Whip-poor-will, and as having the same notes and manners.

After such authorities it was less to be wondered at that many of our own citizens and some of our naturalists and writers should fall into the like mistake; as copies of the works of those English naturalists are to be found in several of our colleges, and in some of our public as well as private libraries. The means which the author of American Ornithology took to satisfy his own mind, and those of his friends, on this subject, were detailed at large, in a paper published about two years ago, in a periodical work of this city, with which extract I shall close my account of the present species.

"On the question is the Whip-poor-will and the Night-hawk one and the same bird, or are they really two distinct species, there has long been an opposition of sentiment, and many fruitless disputes. Numbers of sensible and observing people, whose intelligence and long residence in the country entitle their opinion to respect, positively assert that the Night-hawk and the Whip-poor-will are very different birds, and do not even associate together. The naturalists of Europe, however, have generally considered the two names as applicable to one and the same species; and this

* The figure is by mistake called the *Long-winged* Goatsucker. See Arctic Zoology, vol. II, pl. 18.

opinion has also been adopted by two of our most distinguished naturalists, Mr. William Bartram, of Kingsessing,* and Professor Barton, of Philadelphia.† The writer of this, being determined to ascertain the truth by examining for himself, took the following effectual mode of settling this disputed point, the particulars of which he now submits to those interested in the question.

“ Thirteen of those birds usually called Night-hawks, which dart about in the air like Swallows, and sometimes descend with rapidity from a great height, making a hollow sounding noise like that produced by blowing into the bung-hole of an empty hogshead, were shot at different times, and in different places, and accurately examined both outwardly and by dissection. Nine of these were found to be males, and four females. The former all corresponded in the markings and tints of their plumage; the latter also agreed in their marks, differing slightly from the males, tho evidently of the same species. Two others were shot as they rose from the nests, or rather from the eggs, which in both cases were two in number, lying on the open ground. These also agreed in the markings of their plumage with the four preceding; and on dissection were found to be females. The eggs were also secured. A Whip-poor-will was shot in the evening, while in the act of repeating his usual and well known notes. This bird was found to be a male, differing in many remarkable particulars from all the former. Three others were shot at different times during the day, in solitary and dark shaded parts of the woods. Two of these were found to be females, one of which had been sitting on two eggs. The two females resembled each other almost exactly; the male also corresponded in its markings with the one first found; and all four were evidently of one species. The eggs differed from the former both in color and markings.

* *Caprimulgus Americanus*, Night-hawk or Whip-poor-will. Travels, p. 292.

† *Caprimulgus Virginianus*, Whip-poor-will or Night-hawk. Fragments of the Natural History of Pennsylvania, p. 3. See also Amer. Phil. Trans. vol. IV, p. 208, 209, note.

“The differences between these two birds were as follow: the sides of the mouth in both sexes of the Whip-poor-will were beset with ranges of long and very strong bristles, extending more than half an inch beyond the point of the bill; both sexes of the Night-hawk were entirely destitute of bristles. The bill of the Whip-poor-will was also more than twice the length of that of the Night-hawk. The long wing quills, of both sexes of the Night-hawk, were of a deep brownish black, with a large spot of white nearly in their middle; and when shut the tips of the wings extended a little *beyond* the tail. The wing quills of the Whip-poor-will, of both sexes, were beautifully spotted with light brown, had no spot of white on them, and when shut the tips of the wings did not reach to the tip of the tail by at least *two inches*. The tail of the Night-hawk was handsomely *forked*, the exterior feathers being the longest, shortening gradually to the middle ones; the tail of the Whip-poor-will was *rounded*, the exterior feathers being the shortest, lengthening gradually to the middle ones.

“After a careful examination of these and several other remarkable differences, it was impossible to withstand the conviction that these birds belonged to two distinct species of the same genus, differing in size, color, and conformation of parts.

“A statement of the principal of these facts having been laid before Mr. Bartram, together with a male and female of each of the above mentioned species, and also a male of the Great Virginian Bat, or *Chuck-will's-widow*, after a particular examination that venerable naturalist was pleased to declare himself fully satisfied; adding that he had now no doubt of the Night-hawk and the Whip-poor-will being two very distinct species of *Caprimulgus*.

“It is not the intention of the writer of this to enter at present into a description of either the plumage, manners, migrations, or economy of these birds, the range of country they inhabit, or the superstitious notions entertained of them; his only

object at present is the correction of an error, which, from the respectability of those by whom it was unwarily adopted, has been but too extensively disseminated, and received by too many as a truth."



Drawn from nature by A. Wilson.

Engraved by A. Wilson.

1. Red Owl. 2. Warbling Flycatcher. 3. Purple Finch. 4. Brown Lark.

RED OWL.

STRIX ASIO.[Plate XLII.—Fig. 1, *Female.*.]*Little Owl*, CATESB. I, 7.—LATHAM, I, 123.—LINN. *Syst.* 132.—*Arct. Zool.* II, No. 117.TURT. *Syst.* I, p. 166.—PEALE'S *Museum*, No. 428.

THIS is another of our nocturnal wanderers, well known by its common name, the *Little Screech Owl*; and noted for its melancholy quivering kind of wailing in the evenings, particularly towards the latter part of summer and autumn, near the farm house. On clear moonlight nights they answer each other from various parts of the fields or orchard; roost during the day in thick evergreens, such as cedar, pine, or juniper trees, and are rarely seen abroad in sunshine. In May they construct their nest in the hollow of a tree, often in the orchard in an old apple tree; the nest is composed of some hay and a few feathers; the eggs are four, pure white and nearly round. The young are at first covered with a whitish down.

The bird represented on the plate I kept for several weeks in the room beside me. It was caught in a barn, where it had taken up its lodging, probably for the greater convenience of mousing; and being unhurt, I had an opportunity of remarking its manners. At first it struck itself so forcibly against the window as frequently to deprive it, seemingly, of all sensation for several minutes; this was done so repeatedly that I began to fear that either the glass or the Owl's skull must give way. In a few days, however, it either began to comprehend something of the matter, or to take disgust at the glass, for it never repeated its attempts; and soon became quite tame and familiar. Those who have seen this bird only in

the day, can form but an imperfect idea of its activity and even sprightliness in its proper season of exercise. Throughout the day it was all stillness and gravity; its eyelids half shut, its neck contracted, and its head shrunk seemingly into its body; but scarcely was the sun set, and twilight began to approach, when its eyes became full and sparkling, like two living globes of fire; it crouched on its perch, reconnoitred every object around with looks of eager fierceness; alighted and fed; stood on the meat with clenched talons, while it tore it in morsels with its bill; flew round the room with the silence of thought, and perching, moaned out its melancholy notes with many lively gesticulations, not at all accordant with the pitiful tone of its ditty, which reminded one of the shivering moanings of a half frozen puppy.

This species is found generally over the United States, and is not migratory.

The Red Owl is eight inches and a half long, and twenty-one inches in extent; general color of the plumage above a bright nut brown or tawny red; the shafts black; exterior edges of the outer row of scapulars white; bastard wing, the five first primaries, and three or four of the first greater coverts also spotted with white; whole wing quills spotted with dusky on their exterior webs; tail rounded, transversely barred with dusky and pale brown; chin, breast, and sides bright reddish brown, streaked laterally with black, intermixed with white; belly and vent white, spotted with bright brown; legs covered to the claws with pale brown hairy down; extremities of the toes and claws pale bluish, ending in black; bill a pale bluish horn color; eyes vivid yellow; inner angles of the eyes, eye-brows, and space surrounding the bill whitish; rest of the face nut brown; head horned or eared, each consisting of nine or ten feathers of a tawny red, shafted with black.

WARBLING FLYCATCHER.

MUSCICAPA MELODIA.

[Plate XLII.—Fig. 2.]

THIS sweet little warbler is for the first time figured and described. In its general appearance it resembles the Red-eyed Flycatcher; but on a close comparison differs from that bird in many particulars. It arrives in Pennsylvania about the middle of April, and inhabits the thick foliage of orchards and high trees; its voice is soft, tender and soothing, and its notes flow in an easy continued strain that is extremely pleasing. It is often heard among the weeping willows and Lombardy poplars of the city; is rarely observed in the woods; but seems particularly attached to the society of man. It gleans among the leaves, occasionally darting after winged insects, and searching for caterpillars; and seems by its manners to partake considerably of the nature of the genus *Sylvia*. It is late in departing, and I have frequently heard its notes among the fading leaves of the poplar in October.

This little bird may be distinguished from all the rest of our songsters by the soft tender easy flow of its notes, while hid among the foliage. In these there is nothing harsh, sudden or emphatical; they glide along in a kind of meandering strain that is peculiarly its own. In May and June it may be generally heard in the orchards, the borders of the city, and around the farm house.

This species is five inches and a half long, and eight inches and a half in extent; bill dull lead color above, and notched near the point, lower a pale flesh color; eye dark hazel; line over the eye and whole lower parts white, the latter tinged with very pale greenish yellow near the breast; upper parts a pale green olive;

wings brown, broadly edged with pale olive green; tail slightly forked, edged with olive; the legs and feet pale lead; the head inclines a little to ash; no white on the wings or tail. Male and female nearly alike.

PURPLE FINCH.

FRINGILLA PURPUREA.

[Plate XLII.—Fig. 3.]

THIS bird is represented as he appears previous to receiving his crimson plumage, and also when moulting. By recurring to the figure in vol. I, pl. 7, fig. 4, of this work, which exhibits him in his full dress, the great difference of color will be observed to which this species is annually subject.

It is matter of doubt with me whether this species ought not to be classed with the *Loxia*; the great thickness of the bill, and similarity that prevails between this and the Pine Grosbeak almost induced me to adopt it into that class. But respect for other authorities has prevented me from making this alteration.

When these birds are taken in their crimson dress, and kept in a cage till they moult their feathers, they uniformly change to their present appearance and sometimes never after receive their red color. They are also subject, if well fed, to become so fat as literally to die of corpulency, of which I have seen several instances; being at these times subject to something resembling apoplexy, from which they sometimes recover in a few minutes, but oftener expire in the same space of time.

The female is entirely without the red, and differs from the present only in having less yellow about her.

These birds regularly arrive from the north, where they breed, in September; and visit us from the south again early in April, feeding on the cherry blossoms as soon as they appear. Of the particulars relative to this species the reader is referred to the account in vol. I, already mentioned.

The individual figured in the plate measured six inches and a quarter in length, and ten inches in extent; the bill was horn colored; upper parts of the plumage brown olive strongly tinged with yellow, particularly on the rump, where it was brownish yellow; from above the eye, backwards, passed a streak of white, and another more irregular one from the lower mandible; feathers of the crown narrow, rather long, and generally erected, but not so as to form a crest; nostrils and base of the bill covered with reflected brownish hairs; eye dark hazel; wings and tail dark blackish brown, edged with olive; first and second row of coverts tipped with pale yellow; chin white; breast pale cream, marked with pointed spots of deep olive brown; belly and vent white; legs brown. This bird, with several others marked nearly in the same manner, was shot April twenty-fifth, while engaged in eating the buds from the beech tree.

BROWN LARK.

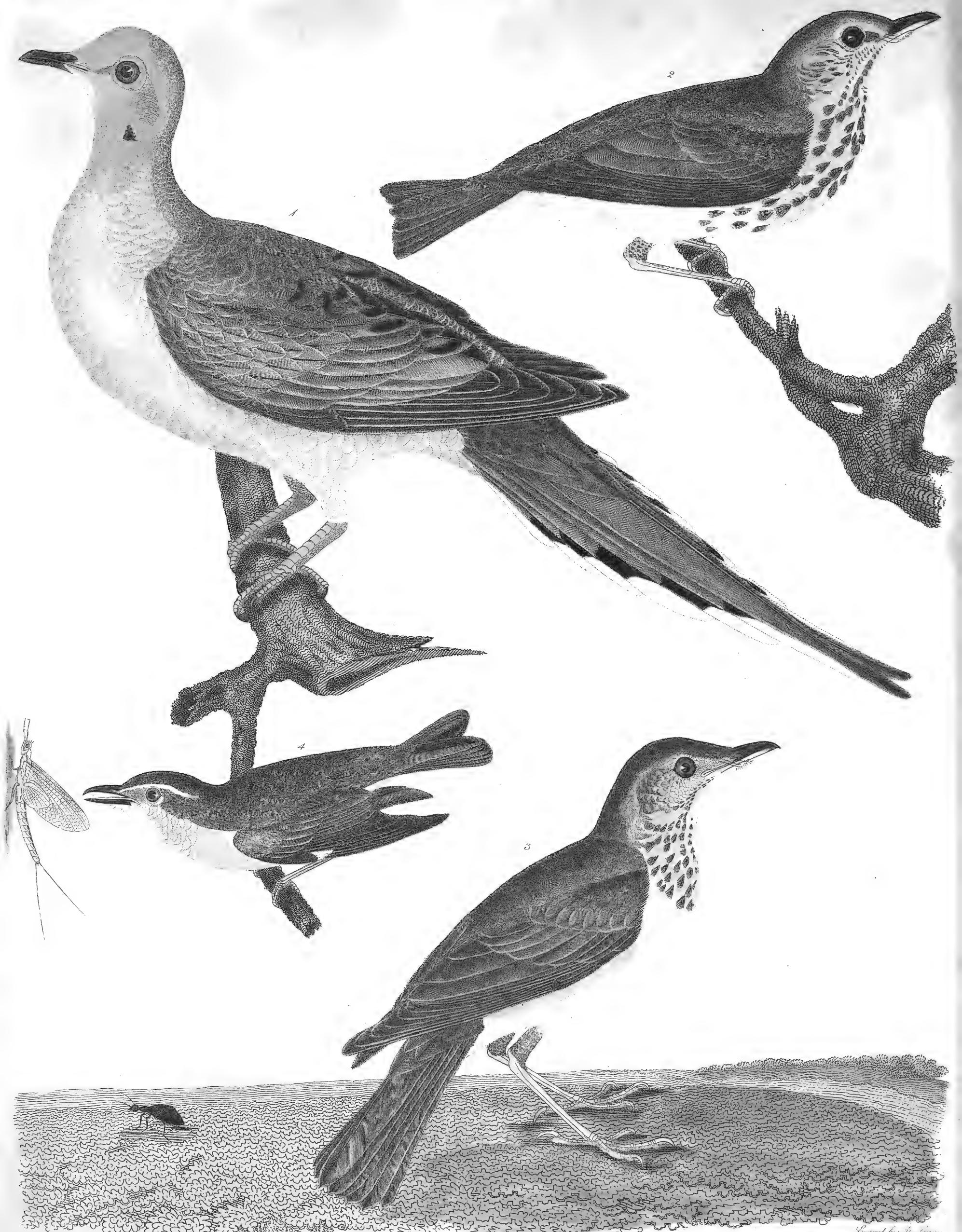
ALAUDA RUFA.

[Plate XLII.—Fig. 4.]

Red Lark, EDW. 297.—*Arct. Zool.* No. 279.—*LATHAM*, II, 376.—*L'Alouette aux joues brunes de Pensylvanie*, BUFF. V, 58.—*PEALE's Museum*, No. 5138.

IN what particular district of the northern regions this bird breeds, I am unable to say. In Pennsylvania it first arrives from the north about the middle of October; flies in loose scattered flocks; is strongly attached to flat, newly-ploughed fields, commons, and such like situations; has a feeble note characteristic of its tribe; runs rapidly along the ground; and when the flock takes to wing they fly high, and generally to a considerable distance before they alight. Many of them continue in the neighbourhood of Philadelphia all winter, if the season be moderate. In the southern states, particularly in the lower parts of North and South Carolina, I found these Larks in great abundance in the middle of February. Loose flocks of many hundreds were driving about from one corn field to another; and in the low rice grounds they were in great abundance. On opening numbers of these, they appeared to have been feeding on various small seeds with a large quantity of gravel. On the eighth of April I shot several of these birds in the neighbourhood of Lexington, Kentucky. In Pennsylvania they generally disappear, on their way to the north, about the beginning of May, or earlier. At Portland, in the District of Maine, I met with a flock of these birds in October. I do not know that they breed within the United States. Of their song, nest, eggs, &c. we have no account.

The Brown Lark is six inches long, and ten inches and a half in extent; the upper parts brown olive touched with dusky; greater coverts and next superior row lighter; bill black, slender; nostril prominent; chin and line over the eye pale rufous; breast and belly brownish ochre, the former spotted with black; tertials black, the secondaries brown, edged with lighter; tail slightly forked, black; the two exterior feathers marked largely with white; legs dark purplish brown; hind heel long, and nearly straight; eye dark hazel. Male and female nearly alike. Mr. Pennant says that one of these birds was shot near London.



Drawn from nature by C. Wilson

1. Turtle Dove. 2. Hermit Thrush. 3. Tawney Thrush. 4. Pine-swamp Warbler.

Engraved by W. H. Lizars

CAROLINA PIGEON, OR TURTLE DOVE.

COLUMBA CAROLINENSIS.

[Plate XLIII.—Fig. 1.]

LINN. *Syst.* 286.—CATESB. *Car.* I, 24.—BUFF. II, 557. *Pl. enl.* 175.—*La Tourterelle de la Caroline*, BRISSON, I, 110.—PEALE's *Museum*, No. 5088.—TURTON, 479.—*Arct. Zool.* II, No. 188.

THIS is a favorite bird with all those who love to wander among our woods in spring, and listen to their varied harmony. They will there hear many a singular and sprightly performer; but none so mournful as this. The hopeless woe of settled sorrow swelling the heart of female innocence itself, could not assume tones more sad, more tender and affecting. Its notes are four; the first is somewhat the highest, and preparatory, seeming to be uttered with an inspiration of the breath, as if the afflicted creature were just recovering its voice from the last convulsive sobs of distress; this is followed by three long, deep and mournful moanings, that no person of sensibility can listen to without sympathy. A pause of a few minutes ensues; and again the solemn voice of sorrow is renewed as before. This is generally heard in the deepest shaded parts of the woods, frequently about noon and towards the evening.

There is, however, nothing of real distress in all this; quite the reverse. The bird who utters it wantons by the side of his beloved partner, or invites her by his call to some favorite retired and shady retreat. It is the voice of love, of faithful connubial affection, for which the whole family of Doves are so celebrated; and among them all none more deservedly so than the species now before us.

The Turtle Dove is a general inhabitant, in summer, of the United States, from Canada to Florida, and from the sea coast to the Mississippi and far to the westward. They are, however, partially migratory in the northern and middle states; and collect together in North and South Carolina and their corresponding parallels, in great numbers, during the winter. On the second of February, in the neighbourhood of Newbern, North Carolina, I saw a flock of Turtle Doves of many hundreds; in other places, as I advanced farther south, particularly near the Savannah river, in Georgia, the woods were swarming with them, and the whistling of their wings were heard in every direction.

On their return to the north in March, and early in April, they disperse so generally over the country that there are rarely more than three or four seen together, most frequently only two. Here they commonly fly in pairs, resort constantly to the public roads to dust themselves and procure gravel; are often seen in the farmer's yard before the door, the stable, barn and other outhouses, in search of food, seeming little inferior in familiarity at such times to the domestic Pigeon. They often mix with the poultry while they are fed in the morning, visit the yard and adjoining road many times a day, and the pump, creek, horse trough and rills for water.

Their flight is quick, vigorous, and always accompanied by a peculiar whistling of the wings, by which they can easily be distinguished from the Wild Pigeon. They fly with great swiftness, alight on trees, fences, or on the ground indiscriminately; are exceedingly fond of buckwheat, hemp seed, and Indian corn; feed on the berries of the holly, the dogwood and poke, huckle berries, partridge berries, and the small acorns of the live oak and shrub oak. They devour large quantities of gravel, and sometimes pay a visit to the kitchen garden for peas, for which they have a particular regard.

In this part of Pennsylvania they commence building about the beginning of May. The nest is very rudely constructed, generally in an evergreen—among the thick foliage of a vine—in an orchard, on the horizontal branches of an apple tree, and in some cases on the ground. It is composed of a handful of small twigs, laid with little art, on which are scattered dry fibrous roots of plants, and in this almost flat bed are deposited two eggs of a snowy whiteness. The male and female unite in feeding the young, and they have rarely more than two brood in the same season.

The flesh of this bird is considered much superior to that of the Wild Pigeon; but its seeming confidence in man, the tenderness of its notes, and the innocence attached to its character, are with many its security and protection; with others, however, the tenderness of its *flesh*, and the sport of shooting, overcome all other considerations. About the commencement of frost they begin to move off to the south; numbers, however, remain in Pennsylvania during the whole winter.

The Turtle Dove is twelve inches long, and seventeen inches in extent; bill black; eye of a glossy blackness, surrounded with a pale greenish blue skin; crown, upper part of the neck and wings a fine silky slate blue; back, scapulars and lesser wing coverts ashy brown; tertials spotted with black: primaries edged and tipped with white; forehead, sides of the neck and breast, a pale brown vinous orange; under the ear feathers a spot or drop of deep black; immediately below which the plumage reflects the most vivid tints of green, gold and crimson; chin pale yellow ochre; belly and vent whitish; legs and feet coral red, seamed with white; the tail is long and cuneiform, consisting of fourteen feathers; the four exterior ones on each side are marked with black about an inch from the tips, and white thence to the extremity; the next has less of the white at the tip; these gradually lengthen to the four middle ones, which are wholly dark slate; all of them taper towards the points, the two middle ones most so.

The female is an inch shorter, and is otherwise only distinguished by the less brilliancy of her color; she also wants the rich silky blue on the crown, and much of the splendor of the neck; the tail is also somewhat shorter, and the white with which it is marked less pure.

HERMIT THRUSH.

TURDUS SOLITARIUS.

[Plate XLIII.—Fig. 2.]

Little Thrush, CATESBY, I, 31.—EDWARDS, 296.—*Brown Thrush*, *Arct. Zool.* 337,
No. 199.—PEALE's *Museum*, No. 3542.

THE dark solitary cane and myrtle swamps of the southern states are the favorite native haunts of this silent and recluse species, and the more deep and gloomy these are, the more certain we are to meet with this bird flitting among them. This is the species mentioned in the first volume of this work, while treating of the Wood Thrush, as having been figured and described more than fifty years ago by Edwards, from a dried specimen sent him by my friend Mr. William Bartram, under the supposition that it was the Wood Thrush (*Turdus melodus*). It is however considerably less, very differently marked, and altogether destitute of the clear voice and musical powers of that charming minstrel. It also differs in remaining in the southern states during the whole year; whereas the Wood Thrush does not winter even in Georgia; nor arrives within the southern boundary of that state until some time in April.

The Hermit Thrush is rarely seen in Pennsylvania, unless for a few weeks in spring and late in the Fall, long after the Wood Thrush has left us, and when scarcely a summer bird remains in the woods. In both seasons it is mute, having only, in spring, an occasional squeak like that of a young stray chicken. Along the Atlantic coast in New Jersey they remain longer and later, as I have observed them there late in November. In the cane swamps of the Chactaw nation they were frequent in the month of May, on the twelfth of which I examined one of their nests on a horizon-

tal branch immediately over the path. The female was sitting, and left it with great reluctance, so that I had nearly laid my hand on her before she flew. The nest was fixed on the upper part of the body of the branch, and constructed with great neatness; but without mud or plaster, contrary to the custom of the Wood Thrush. The outside was composed of a considerable quantity of coarse rooty grass, intermixed with horse hair, and lined with a fine green colored, thread-like grass, perfectly dry, laid circularly with particular neatness. The eggs were four, of a pale greenish blue, marked with specks and blotches of olive, particularly at the great end. I also observed this bird on the banks of the Cumberland river in April. Its food consists chiefly of berries, of which these low swamps furnish a perpetual abundance, such as those of the holly, myrtle, gall bush, (a species of vaccinium,) yapon shrub, and many others.

A superficial observer would instantly pronounce this to be only a variety of the Wood Thrush; but taking into consideration its difference of size, color, manners, want of song, secluded habits, differently formed nest, and spotted eggs, all unlike those of the former, with which it never associates, it is impossible not to conclude it to be a distinct and separate species, however near it may approach to that of the former. Its food, and the country it inhabits for half the year being the same, neither could have produced those differences; and we must believe it to be now, what it ever has and ever will be, a distinct connecting link in the great chain of this part of animated nature; all the sublime reasoning of certain theoretical closet philosophers to the contrary notwithstanding.

Length of the Hermit Thrush seven inches, extent ten inches and a half; upper parts plain deep olive brown, lower dull white; upper part of the breast and throat dull cream color, deepest where the plumage falls over the shoulders of the wing, and marked with large dark brown pointed spots; ear feathers and line over the eye

cream, the former mottled with olive; edges of the wings lighter, tips dusky; tail coverts and tail inclining to a reddish fox color. In the Wood Thrush these parts incline to greenish olive. Tail slightly forked; legs dusky; bill black above and at the tip, whitish below; iris black and very full; chin whitish.

The female differs very little, chiefly in being generally darker in the tints, and having the spots on the breast larger and more dusky.

TAWNY THRUSH.

TURDUS MUSTELINUS.

[Plate XLIII.—Fig. 3.]

PEALE's *Museum*, No. 5570.

THIS species makes its appearance in Pennsylvania from the south regularly about the beginning of May, stays with us a week or two, and passes on to the north and to the high mountainous districts to breed. It has no song, but a sharp chuck. About the twentieth of May I met with numbers of them in the Great Pine swamp, near Pocano; and on the twenty-fifth of September, in the same year, I shot several of them in the neighbourhood of Mr. Bartram's place. I have examined many of these birds in spring, and also on their return in Fall, and found very little difference among them between the male and female. In some specimens the wing coverts were brownish yellow; these appeared to be young birds. I have no doubt but they breed in the northern high districts of the United States; but I have not yet been able to discover their nests.

The Tawny Thrush is ten inches long, and twelve inches in extent; the whole upper parts are a uniform tawny brown; the lower parts white; sides of the breast and under the wings slightly tinged with ash; chin white; throat and upper parts of the breast cream colored, and marked with pointed spots of brown; lores pale ash, or bluish white; cheeks dusky brown; tail nearly even at the end, the shafts of all, as well as those of the wing quills, continued a little beyond their webs; bill black above and at the point, below at the base flesh colored; corners of the mouth yellow; eye large and dark, surrounded with a white ring; legs long, slender and pale brown.

Tho I have given this bird the same name that Mr. Pennant has applied to one of our Thrushes, it must not be considered as the same; the bird which he has denominated the *Tawny Thrush* being evidently from its size, markings, &c. the *Wood Thrush*, described in the first volume of the present book.

No description of the bird here figured, has, to my knowledge, appeared in any former publication.

PINE-SWAMP WARBLER.

SYLVIA PUSILLA.

[Plate XLIII.—Fig. 4.]

THIS little bird is for the first time figured or described. Its favorite haunts are in the deepest and gloomiest pine and hemlock swamps of our mountainous regions, where every tree, trunk, and fallen log is covered with a luxuriant coat of moss, that even mantles over the surface of the ground, and prevents the sportsman from avoiding a thousand holes, springs and swamps, into which he is incessantly plunged. Of the nest of this bird I am unable to speak. I found it associated with the Blackburnian Warbler, the Golden-crested Wren, Ruby-crowned Wren, Yellow Rump, and others of that description, in such places as I have described, about the middle of May. It seemed as active in flycatching as in searching for other insects, darting nimbly about among the branches, and flirting its wings; but I could not perceive that it had either note or song. I shot three, one male and two females. I have no doubt that they breed in those solitary swamps, as well as many other of their associates.

The Pine-swamp Warbler is four inches and a quarter long, and seven inches and a quarter in extent; bill black, not notched, but furnished with bristles; upper parts a deep green olive, with slight bluish reflections, particularly on the edges of the tail and on the head; wings dusky, but so broadly edged with olive green as to appear wholly of that tint; immediately below the primary coverts there is a single triangular spot of yellowish white; no other part of the wings is white; the three exterior tail feathers with a spot of white on their inner vanes; the tail is slightly forked; from the nostrils over the eye extends a fine line of white, and

the lower eye-lid is touched with the same tint; lores blackish; sides of the neck and auriculars green olive; whole lower parts pale yellow ochre, with a tinge of greenish, duskiest on the throat; legs long and flesh colored.

The plumage of the female differs in nothing from that of the male.

PASSENGER PIGEON.

COLUMBA MIGRATORIA.

[Plate XLIV.—Fig. 1.]

CATESB. I, 23.—LINN. *Syst.* 285.—TURTON, 479.—*Arct. Zool.* p. 322, No. 187.—BRISSON, I, 100.—BUFF. II, 527.—PEALE's *Museum*, No. 5084.

THIS remarkable bird merits a distinguished place in the annals of our feathered tribes; a claim to which I shall endeavour to do justice; and tho' it would be impossible, in the bounds allotted to this account, to relate all I have seen and heard of this species, yet no circumstance shall be omitted with which I am acquainted, (however extraordinary some of these may appear) that may tend to illustrate its history.

The Wild Pigeon of the United States inhabits a wide and extensive region of North America, on this side of the Great Stony mountains, beyond which to the westward, I have not heard of their being seen. According to Mr. Hutchins they abound in the country round Hudson's Bay, where they usually remain as late as December, feeding, when the ground is covered with snow, on the buds of juniper. They spread over the whole of Canada—were seen by captain Lewis and his party near the Great Falls of the Missouri, upwards of two thousand five hundred miles from its mouth, reckoning the meanderings of the river—were also met with in the interior of Louisiana by colonel Pike; and extend their range as far south as the gulf of Mexico; occasionally visiting or breeding in almost every quarter of the United States.

But the most remarkable characteristic of these birds is their associating together, both in their migrations and also during the period of incubation, in such prodigious numbers as almost to sur-





1. Salvin's Tropic. 2. Blue-mountain Warbler. 3. Mountain Warbler. 4. N. H.

pass belief; and which has no parallel among any other of the feathered tribes, on the face of the earth, with which naturalists are acquainted.

These migrations appear to be undertaken rather in quest of food, than merely to avoid the cold of the climate; since we find them lingering in the northern regions around Hudson's Bay so late as December; and since their appearance is so casual and irregular; sometimes not visiting certain districts for several years in any considerable numbers, while at other times they are innumerable. I have witnessed these migrations in the Genesee country —often in Pennsylvania, and also in various parts of Virginia, with amazement; but all that I had then seen of them were mere straggling parties, when compared with the congregated millions which I have since beheld in our western forests, in the states of Ohio, Kentucky, and the Indiana territory. These fertile and extensive regions abound with the nutritious beech nut, which constitutes the chief food of the Wild Pigeon. In seasons when these nuts are abundant, corresponding multitudes of Pigeons may be confidently expected. It sometimes happens that having consumed the whole produce of the beech trees in an extensive district, they discover another at the distance perhaps of sixty or eighty miles, to which they regularly repair every morning, and return as regularly in the course of the day, or in the evening, to their place of general rendezvous, or as it is usually called, the *roosting place*. These roosting places are always in the woods, and sometimes occupy a large extent of forest. When they have frequented one of these places for some time the appearance it exhibits is surprising. The ground is covered to the depth of several inches with their dung; all the tender grass and underwood destroyed; the surface strewed with large limbs of trees broken down by the weight of the birds clustering one above another; and the trees themselves, for thousands of acres, killed as completely as if girdled with an axe. The marks of this desolation remain for many years on the spot; and num-

rous places could be pointed out where for several years after scarce a single vegetable made its appearance.

When these roosts are first discovered, the inhabitants from considerable distances visit them in the night, with guns, clubs, long poles, pots of sulphur, and various other engines of destruction. In a few hours they fill many sacks, and load their horses with them. By the Indians a Pigeon roost, or breeding place, is considered an important source of national profit and dependance for that season; and all their active ingenuity is exercised on the occasion. The *breeding place* differs from the former in its greater extent. In the western countries above mentioned, these are generally in beech woods, and often extend in nearly a straight line across the country for a great way. Not far from Shelbyville in the state of Kentucky, about five years ago, there was one of these breeding places, which stretched through the woods in nearly a north and south direction; was several miles in breadth, and was said to be upwards of forty miles in extent! In this tract almost every tree was furnished with nests, wherever the branches could accommodate them. The Pigeons made their first appearance there about the tenth of April, and left it altogether, with their young, before the twenty-fifth of May.

As soon as the young were fully grown, and before they left the nests, numerous parties of the inhabitants, from all parts of the adjacent country, came with waggons, axes, beds, cooking utensils, many of them accompanied by the greater part of their families, and encamped for several days at this immense nursery. Several of them informed me, that the noise in the woods was so great as to terrify their horses, and that it was difficult for one person to hear another speak without bawling in his ear. The ground was strewed with broken limbs of trees, eggs, and young squab Pigeons, which had been precipitated from above, and on which herds of hogs were fattening. Hawks, Buzzards and Eagles were sailing about in great numbers, and seizing the squabs from their nests at

pleasure; while from twenty feet upwards to the tops of the trees the view through the woods presented a perpetual tumult of crowding and fluttering multitudes of pigeons, their wings roaring like thunder; mingled with the frequent crash of falling timber; for now the axe-men were at work cutting down those trees that seemed to be most crowded with nests, and contrived to fell them in such a manner, that in their descent they might bring down several others; by which means the falling of one large tree sometimes produced two hundred squabs, little inferior in size to the old ones, and almost one mass of fat. On some single trees upwards of one hundred nests were found, each containing *one* young only, a circumstance in the history of this bird not generally known to naturalists. It was dangerous to walk under these flying and fluttering millions, from the frequent fall of large branches, broken down by the weight of the multitudes above, and which in their descent often destroyed numbers of the birds themselves; while the clothes of those engaged in traversing the woods were completely covered with the excrements of the Pigeons.

These circumstances were related to me by many of the most respectable part of the community in that quarter; and were confirmed in part by what I myself witnessed. I passed for several miles through this same breeding place, where every tree was spotted with nests, the remains of those above described. In many instances I counted upwards of ninety nests on a single tree; but the Pigeons had abandoned this place for another, sixty or eighty miles off towards Green river, where they were said at that time to be equally numerous. From the great numbers that were constantly passing over head to or from that quarter, I had no doubt of the truth of this statement. The mast had been chiefly consumed in Kentucky, and the Pigeons, every morning a little before sun-rise, set out for the Indiana territory, the nearest part of which was about sixty miles distant. Many of these returned before ten o'clock, and the great body generally appeared on their return a little after noon.

I had left the public road to visit the remains of the breeding place near Shelbyville, and was traversing the woods with my gun, on my way to Frankfort, when about one o'clock the Pigeons, which I had observed flying the greater part of the morning northerly, began to return in such immense numbers as I never before had witnessed. Coming to an opening by the side of a creek called the Benson, where I had a more uninterrupted view, I was astonished at their appearance. They were flying with great steadiness and rapidity, at a height beyond gun shot, in several strata deep, and so close together that could shot have reached them, one discharge could not have failed of bringing down several individuals. From right to left far as the eye could reach, the breadth of this vast procession extended; seeming every where equally crowded. Curious to determine how long this appearance would continue, I took out my watch to note the time, and sat down to observe them. It was then half past one. I sat for more than an hour, but instead of a diminution of this prodigious procession, it seemed rather to increase both in numbers and rapidity; and, anxious to reach Frankfort before night, I rose and went on. About four o'clock in the afternoon I crossed the Kentucky river, at the town of Frankfort, at which time the living torrent above my head seemed as numerous and as extensive as ever. Long after this I observed them, in large bodies that continued to pass for six or eight minutes, and these again were followed by other detached bodies, all moving in the same south-east direction till after six in the evening. The great breadth of front which this mighty multitude preserved would seem to intimate a corresponding breadth of their breeding place, which by several gentlemen who had lately passed through part of it, was stated to me at *several* miles. It was said to be in Green county, and that the young began to fly about the middle of March. On the seventeenth of April forty-nine miles beyond Danville, and not far from Green river, I crossed this same breeding place, where the nests for more than three miles spotted every tree; the leaves

not being yet out I had a fair prospect of them, and was really astonished at their numbers. A few bodies of Pigeons lingered yet in different parts of the woods, the roaring of whose wings were heard in various quarters around me.

All accounts agree in stating, that each nest contains only one young squab. These are so extremely fat, that the Indians, and many of the whites, are accustomed to melt down the fat for domestic purposes as a substitute for butter and lard. At the time they leave the nest they are nearly as heavy as the old ones; but become much leaner after they are turned out to shift for themselves.

It is universally asserted in the western countries that the Pigeons, tho they have only one young at a time, breed thrice and sometimes four times in the same season; the circumstances already mentioned render this highly probable. It is also worthy of observation, that this takes place during that period when acorns, beech nuts, &c. are scattered about in the greatest abundance and mellowed by the frost. But they are not confined to these alone; buckwheat, hempseed, Indian corn, holly berries, hack berries, huckle berries, and many others furnish them with abundance at almost all seasons. The acorns of the live oak are also eagerly sought after by these birds, and rice has been frequently found in individuals killed many hundred miles to the northward of the nearest rice plantation. The vast quantity of mast which these multitudes consume is a serious loss to the bears, pigs, squirrels and other dependants on the fruits of the forest. I have taken from the crop of a single Wild Pigeon, a good handful of the kernels of beech nuts, intermixed with acorns and chesnuts. To form a rough estimate of the daily consumption of one of these immense flocks, let us first attempt to calculate the numbers of that above mentioned as seen in passing between Frankfort and the Indiana territory. If we suppose this column to have been one mile in breadth (and I believe it to have been much more) and that it moved at the rate

of one mile in a minute; four hours, the time it continued passing, would make its whole length two hundred and forty miles. Again, supposing that each square yard of this moving body comprehended three Pigeons; the square yards in the whole space multiplied by three, would give two thousand two hundred and thirty millions, two hundred and seventy-two thousand pigeons! An almost inconceivable multitude, and yet probably far below the actual amount. Computing each of these to consume half a pint of mast daily, the whole quantity at this rate would equal seventeen millions, four hundred and twenty-four thousand bushels per day! Heaven has wisely and graciously given to these birds rapidity of flight and a disposition to range over vast uncultivated tracts of the earth; otherwise they must have perished in the districts where they resided, or devoured up the whole productions of agriculture as well as those of the forests.

A few observations on the mode of flight of these birds must not be omitted. The appearance of large detached bodies of them in the air, and the various evolutions they display, are strikingly picturesque and interesting. In descending the Ohio by myself in the month of February, I often rested on my oars to contemplate their aerial manœuvres. A column, eight or ten miles in length, would appear from Kentucky, high in air, steering across to Indiana. The leaders of this great body would sometimes gradually vary their course, until it formed a large bend of more than a mile in diameter, those behind tracing the exact route of their predecessors. This would continue sometimes long after both extremities were beyond the reach of sight, so that the whole with its glittery undulations, marked a space on the face of the heavens resembling the windings of a vast and majestic river. When this bend became very great, the birds, as if sensible of the unnecessary circuitous course they were taking, suddenly changed their direction, so that what was in column before became an immense front, straightening all its indentures, until it swept the heavens in one vast and in-

finitely extended line. Other lesser bodies also united with each other, as they happened to approach, with such ease and elegance of evolution, forming new figures, and varying these as they united or separated, that I was never tired of contemplating them. Sometimes a Hawk would make a sweep on a particular part of the column, from a great height, when, almost as quick as lightning, that part shot downwards out of the common track; but soon rising again, continued advancing at the same height as before; this inflection was continued by those behind, who on arriving at this point dived down, almost perpendicularly, to a great depth, and rising followed the exact path of those that went before. As these vast bodies passed over the river near me, the surface of the water, which was before smooth as glass, appeared marked with innumerable dimples, occasioned by the dropping of their dung, resembling the commencement of a shower of large drops of rain or hail.

Happening to go ashore one charming afternoon, to purchase some milk at a house that stood near the river, and while talking with the people within doors, I was suddenly struck with astonishment at a loud rushing roar, succeeded by instant darkness, which, on the first moment, I took for a tornado about to overwhelm the house and every thing around in destruction. The people observing my surprise, coolly said "It is only the Pigeons;" and on running out I beheld a flock, thirty or forty yards in width, sweeping along very low, between the house and the mountain or height that formed the second bank of the river. These continued passing for more than a quarter of an hour, and at length varied their bearing so as to pass over the mountain, behind which they disappeared before the rear came up.

In the Atlantic states, tho they never appear in such unparalleled multitudes, they are sometimes very numerous; and great havoc is then made amongst them with the gun, the clap net, and various other implements of destruction. As soon as it is ascertained in a town that the Pigeons are flying numerously in the

neighbourhood, the gunners rise *en masse*; the clap nets are spread out on suitable situations, commonly on an open height in an old buckwheat field; four or five live Pigeons, with their eyelids sewed up, are fastened on a moveable stick—a small hut of branches is fitted up for the fowler at the distance of forty or fifty yards; by the pulling of a string, the stick on which the Pigeons rest is alternately elevated and depressed, which produces a fluttering of their wings similar to that of birds just alighting; this being perceived by the passing flocks, they descend with great rapidity, and finding corn, buckwheat, &c. strewed about, begin to feed, and are instantly, by the pulling of a cord, covered by the net. In this manner ten, twenty, and even thirty dozen have been caught at one sweep. Meantime the air is darkened with large bodies of them moving in various directions; the woods also swarm with them in search of acorns; and the thundering of musquetry is perpetual on all sides from morning to night. Waggon loads of them are poured into market, where they sell from fifty to twenty-five and even twelve cents per dozen; and Pigeons become the order of the day at dinner, breakfast and supper, until the very name becomes sickening. When they have been kept alive, and fed for some time on corn and buckwheat, their flesh acquires great superiority; but in their common state they are dry and blackish, and far inferior to the full grown young ones, or squabs.

The nest of the Wild Pigeon is formed of a few dry slender twigs, carelessly put together, and with so little concavity, that the young one when half grown can easily be seen from below. The eggs are pure white. Great numbers of Hawks, and sometimes the Bald Eagle himself, hover about those breeding places, and seize the old or the young from the nest amidst the rising multitudes, and with the most daring effrontery. The young when beginning to fly confine themselves to the under part of the tall woods where there is no brush, and where nuts and acorns are abundant, searching among the leaves for mast, and appear like a prodigious

torrent rolling along through the woods, every one striving to be in the front. Vast numbers of them are shot while in this situation. A person told me, that he once rode furiously into one of these rolling multitudes, and picked up thirteen Pigeons which had been trampled to death by his horse's feet. In a few minutes they will beat the whole nuts from a tree with their wings, while all is a scramble, both above and below, for the same. They have the same cooing notes common to domestic Pigeons; but much less of their gesticulations. In some flocks you will find nothing but young ones, which are easily distinguishable by their motley dress. In others they will be mostly females; and again great multitudes of males, with few or no females. I cannot account for this in any other way than that during the time of incubation the males are exclusively engaged in procuring food, both for themselves and their mates; and the young being unable yet to undertake these extensive excursions, associate together accordingly. But even in winter I know of several species of birds who separate in this manner, particularly the Red-winged Starling, among whom thousands of old males may be found with few or no young or females along with them.

Stragglers from these immense armies settle in almost every part of the country, particularly among the beech woods, and in the pine and hemlock woods of the eastern and northern parts of the continent. Mr. Pennant informs us, that they breed near Moose fort at Hudson's Bay, in N. lat. 51° , and I myself have seen the remains of a large breeding place as far south as the country of the Chactaws, in lat. 32° . In the former of these places they are said to remain until December; from which circumstance it is evident that they are not regular in their migrations like many other species, but rove about, as scarcity of food urges them. Every spring, however, as well as Fall, more or less of them are seen in the neighbourhood of Philadelphia; but it is only once in several years that they appear in such formidable bodies; and this commonly when

the snows are heavy to the north, the winter here more than usually mild, and acorns, &c. abundant.

The Passenger Pigeon is sixteen inches long, and twenty-four inches in extent; bill black; nostril covered by a high rounding protuberance; eye brilliant fiery orange; orbit, or space surrounding it, purplish flesh colored skin; head, upper part of the neck, and chin, a fine slate blue, lightest on the chin; throat, breast and sides, as far as the thighs, a reddish hazel; lower part of the neck and sides of the same resplendent changeable gold, green and purplish crimson, the latter most predominant; the ground color slate; the plumage of this part is of a peculiar structure, ragged at the ends; belly and vent white; lower part of the breast fading into a pale vinaceous red; thighs the same; legs and feet lake, seamed with white; back, rump and tail coverts dark slate, spotted on the shoulders with a few scattered marks of black; the scapulars tinged with brown; greater coverts light slate; primaries and secondaries dull black, the former tipt and edged with brownish white; tail long, and greatly cuneiform, all the feathers tapering towards the point, the two middle ones plain deep black, the other five, on each side, hoary white, lightest near the tips, deepening into bluish near the bases, where each is crossed on the inner vane with a broad spot of black, and nearer the root with another of ferruginous; primaries edged with white; bastard wing black.

The female is about half an inch shorter, and an inch less in extent; breast cinereous brown; upper part of the neck inclining to ash; the spot of changeable gold green and carmine much less, and not so brilliant; tail coverts brownish slate; naked orbits slate colored; in all other respects like the male in color, but less vivid, and more tinged with brown; the eye not so brilliant an orange. In both the tail has only twelve feathers.

BLUE-MOUNTAIN WARBLER.

SYLVIA MONTANA.

[Plate XLIV.—Fig. 2.]

THIS new species was first discovered near that celebrated ridge, or range of mountains, with whose name I have honored it. Several of these solitary Warblers remain yet to be gleaned up from the airy heights of our alpine scenery, as well as from the recesses of our swamps and morasses, whither it is my design to pursue them by every opportunity. Some of these I believe rarely or never visit the lower cultivated parts of the country; but seem only at home among the glooms and silence of those dreary solitudes. The present species seems of that family, or subdivision of the Warblers, that approach the Flycatcher, darting after flies wherever they see them, and also searching with great activity among the leaves. Its song was a feeble screep, three or four times repeated.

This species is four inches and three quarters in length; the upper parts a rich yellow olive; front, cheeks and chin yellow, also the sides of the neck; breast and belly pale yellow, streaked with black or dusky; vent plain pale yellow; wings black, first and second row of coverts broadly tipped with pale yellowish white; tertials the same; the rest of the quills edged with whitish; tail black, handsomely rounded, edged with pale olive; the two exterior feathers, on each side, white on the inner vanes from the middle to the tips, and edged on the outer side with white; bill dark brown; legs and feet purple brown; soles yellow; eye dark hazel.

This was a male. The female I have never seen.

HEMLOCK WARBLER.

SYLVIA PARUS.

[Plate XLIV.—Fig. 3.]

THIS is another nondescript, first met with in the Great Pine swamp, Pennsylvania. From observing it almost always among the branches of the hemlock trees, I have designated it by that appellation, the markings of its plumage not affording me a peculiarity sufficient for a specific name. It is a most lively and active little bird, climbing among the twigs, and hanging like a Titmouse on the branches; but possessing all the external characters of the Warblers. It has a few low and very sweet notes, at which times it stops and repeats them for a short time, then darts about as before. It shoots after flies to a considerable distance; often begins at the lower branches, and hunts with great regularity and admirable dexterity, upwards to the top, then flies off to the next tree, at the lower branches of which it commences hunting upwards as before.

This species is five inches and a half long, and eight inches in extent; bill black above, pale below; upper parts of the plumage black, thinly streaked with yellow olive; head above yellow, dotted with black; line from the nostril over the eye, sides of the neck and whole breast rich yellow; belly paler, streaked with dusky; round the breast some small streaks of blackish; wing black, the greater coverts and next superior row broadly tipped with white, forming two broad bars across the wing; primaries edged with olive, tertials with white; tail coverts black, tipped with olive; tail slightly forked, black, and edged with olive; the three exterior feathers altogether white on their inner vanes; legs and feet dirty

yellow; eye dark hazel; a few bristles at the mouth; bill not notched.

This was a male. Of the female I can at present give no account.

SHARP-SHINNED HAWK.

FALCO VELOX.

[Plate XLV.—Fig. 1.]

THIS is a bold and daring species, hitherto unknown to naturalists. The only Hawk we have which approaches near it in color is the Pigeon Hawk, figured in the second volume of this work, plate 15. But there are such striking differences in the present, not only in color, but in other respects, as to point out decisively its claims to rank as a distinct species. Its long and slender legs and toes; its red fiery eye, feathered to the eye-lids; its triangular grooved nostril, and length of tail, are all different from the Pigeon Hawk, whose legs are short, its eyes dark hazel, surrounded with a broad bare yellow skin, and its nostrils small and circular, centered with a slender point that rises in it like the pistil of a flower. There is no Hawk mentioned by Mr. Pennant either as inhabiting Europe or America, agreeing with this. I may therefore with confidence pronounce it a nondescript; and have chosen a very singular peculiarity which it possesses for its specific appellation.

This Hawk was shot on the banks of the Schuylkill, near Mr. Bartram's. Its singularity of flight surprised me long before I succeeded in procuring it. It seemed to throw itself from one quarter of the heavens to the other, with prodigious velocity, inclining to the earth, swept suddenly down into a thicket, and instantly re-appeared with a small bird in its talons. This feat I saw it twice perform, so that it was not merely an accidental manœuvre. The rapidity and seeming violence of these zig-zag excursions were really remarkable, and appeared to me to be for



Drawn from Nature by A. Wilson.

1. Sharp-shinned Hawk. 2. Redstart. 3. Yellow-rump.

Engraved by A. Lawson.



the purpose of seizing his prey by sudden surprise and main force of flight. I kept this Hawk alive for several days, and was hopeful I might be able to cure him; but he died of his wound.

On the fifteenth of September two young men whom I had dispatched on a shooting expedition, met with this species on one of the ranges of the Alleghany. It was driving around in the same furious headlong manner, and had made a sweep at a red squirrel, which eluded its grasp, and itself became the victim. These are the only individuals of this bird I have been able to procure, and fortunately they were male and female.

The female of this species (represented in the plate) is thirteen inches long, and twenty-five inches in extent; the bill is black towards the point on both mandibles, but light blue at its base; cere a fine pea green; sides of the mouth the same; lores pale whitish blue, beset with hairs; crown and whole upper parts very dark brown, every feather narrowly skirted with a bright rust color; over the eye a stripe of yellowish white, streaked with deep brown; primaries spotted on their inner vanes with black; secondaries crossed on both vanes with three bars of dusky, below the coverts; inner vanes of both primaries and secondaries brownish white; all the scapulars marked with large round spots of white, not seen unless the plumage be parted with the hand; tail long, nearly even, crossed with four bars of black and as many of brown ash, and tipped with white; throat and whole lower parts pale yellowish white; the former marked with fine long pointed spots of dark brown, the latter with large oblong spots of reddish brown; femorals thickly marked with spade-formed spots, on a pale rufous ground; legs long and feathered a little below the knee, of a greenish yellow color, most yellow at the joints; edges of the inside of the shins, below the knee, projecting like the edge of a knife, hard and sharp, as if intended to enable the bird to hold its prey with more security between them; eye brilliant yellow, sunk below a projecting cartilage.

The male was nearly two inches shorter; the upper parts dark brown; the feathers skirted with pale reddish, the front also streaked with the same; cere greenish yellow; lores bluish; bill black, as in the female; streak over the eye lighter than in the former; chin white; breast the same, streaked with brown; bars on the tail rather narrower, but in tint and number the same; belly and vent white; feet and shins exactly as in the female; the toes have the same pendulous lobes which mark those of the female, and of which the representation in the plate will give a correct idea; the wings barred with black, very noticeable on the lower side.

Since writing the above I have shot another specimen of this Hawk, corresponding in almost every particular with the male last mentioned; and which on dissection also proves to be a male. This last had within the grasp of his sharp talons a small lizard, just killed, on which he was about to feed. How he contrived to get possession of it appeared to me matter of surprise, as lightning itself seems scarcely more fleet than this little reptile. So rapid are its motions, that in passing from one place to another it vanishes, and actually eludes the eye in running a distance of twelve or fifteen feet. It is frequently seen on fences that are covered with grey moss and lichen, which in color it very much resembles; it seeks shelter in hollow trees, and also in the ground about their decayed roots. They are most numerous in hilly parts of the country, particularly on the declivities of the Blue mountain, among the crevices of rocks and stones. When they are disposed to run, it is almost impossible to shoot them, as they disappear at the first touch of the trigger. For the satisfaction of the curious I have introduced a full sized figure of this lizard, which is known in many parts of the country by the name of the Swift.

REDSSTART.

MUSCICAPA RUTICILLA.

[Plate XLV.—Fig. 2.]

EDWARDS, 257.—*Yellow tail*, *Arct. Zool.* II, p. 466, No. 301.

BY recurring to vol. I, plate 6, of this work, the male of this species may be seen in his perfect dress; the present figure represents the young bird as he appears for the first two seasons; the female differs very little from this, chiefly in the green olive being more inclined to ash.

This is one of our summer birds, and from the circumstance of being found off Hispaniola in November, is supposed to winter in the islands. They leave Pennsylvania about the twentieth of September; are dexterous flycatchers, tho ranked by European naturalists among the warblers, having the bill notched and beset with long bristles.

In its present dress the Redstart makes its appearance in Pennsylvania about the middle or twentieth of April; and from being heard chanting its few sprightly notes has been supposed by some of our own naturalists to be a different species. I have, however, found both parents of the same nest in the same dress nearly; the female, eggs and nest, as well as the notes of the male, agreeing exactly with those of the Redstart; evidence sufficiently satisfactory to me.

Head above dull slate; throat pale buff; sides of the breast and four exterior tail feathers fine yellow, tipt with dark brown; wings and back greenish olive; tail coverts blackish, tipt with ash; belly dull white; no white or yellow on the wings; legs dirty purplish brown; bill black.

The Redstart extends very generally over the United States; having myself seen it on the borders of Canada, and also in the Mississippi territory.

This species has the constant habit of flirting its expanded tail from side to side as it runs along the branches, with its head levelled almost in a line with its body; occasionally shooting off after winged insects, in a downward zig-zag direction, and with admirable dexterity, snapping its bill as it descends. Its notes are few and feeble, repeated at short intervals as it darts among the foliage; having at some times a resemblance to the sounds *sic sic sàic*; at others of *weesy weesy weesy*; which last seems to be its call for the female, while the former appears to be its most common note.

YELLOW RUMP.

SYLVIA CORONATA.

[Plate XLV.—Fig. 3.]

EDWARDS, 255.—*Arct. Zool.* II, p. 400, No. 288.

I MUST again refer the reader to the second volume of American Ornithology, plate 17, fig. 4, for this bird in his perfect colors; the present figure exhibits him in his winter dress, as he arrives to us from the north early in September; the former shews him in his spring and summer dress, as he visits us from the south about the twentieth of March. These birds remain with us in Pennsylvania from September until the season becomes severely cold, feeding on the berries of the red cedar; and as December's snows come on they retreat to the lower countries of the southern states, where in February I found them in great numbers among the myrtles, feeding on the berries of that shrub; from which circumstance they are usually called in that quarter Myrtle birds. Their breeding place I suspect to be in our northern districts, among the swamps and evergreens so abundant there, having myself shot them in the Great Pine swamp about the middle of May.

They range along our whole Atlantic coast in winter, seeming particularly fond of the red cedar and the myrtle; and I have found them numerous, in October, on the low islands along the coast of New Jersey in the same pursuit. They also dart after flies wherever they can see them, generally skipping about with the wings loose.

Length five inches and a quarter, extent eight inches; upper parts and sides of the neck a dark mouse brown, obscurely streak-

ed on the back with dusky black; lower parts pale dull yellowish white; breast marked with faint streaks of brown; chin and vent white; rump vivid yellow; at each side of the breast, and also on the crown, a spot of fainter yellow; this last not observable without separating the plumage; bill, legs and wings black; lesser coverts tipped with brownish white; tail coverts slate; the three exterior tail feathers marked on their inner vanes with white; a touch of the same on the upper and lower eye-lid. Male and female at this season nearly alike. They begin to change about the middle of February, and in four or five weeks are in their slate colored dress, as represented in the figure referred to.

END OF THE FIFTH VOLUME.





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